RICOH

RICOH PJ K7000

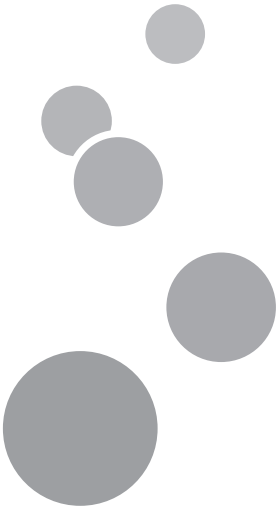
User's Manual

1. Introduction

2. Installation

3. User Controls

4. Appendices



Read this manual carefully before you use this machine and keep it handy for future reference. For safe and correct use, be sure to read the Precautions in this manual before using the machine.

Safety Information

This chapter describes safety information for this machine.

Information

Introduction

This manual contains detailed instructions and notes on the operation and use of this machine. For your safety and benefit, read this manual carefully before using the machine. Keep this manual in a handy place for quick reference.

Important

Contents of this manual are subject to change without prior notice.

In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

Some illustrations in this manual might be slightly different from the machine.

Caution

The manufacturer shall not be responsible for any damage or expense that might result from the use of parts other than genuine parts from the manufacturer with your office products.

Safety Information

When using this machine, the following safety precautions should always be followed.

Safety During Operation

In this manual, the following important symbols are used:

⚠ WARNING

Indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.

⚠ CAUTION

Indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property.

Safety Precautions to Be Followed

This section explains safety precautions that should always be followed when using this machine.

Environments where the machine can be used

This section explains safety precautions about environments where the machine can be used.

⚠ WARNING

- Do not place vases, plant pots, cups, toiletries, medicines, small metal objects, or containers holding water or any other liquids, on or close to this machine. Fire or electric shock could result from spillage or if such objects or substances fall inside this machine.

⚠ WARNING

- Keep the product and attachments out of the reach of children. If the product is near children, it might fall over and cause an injury.

⚠ CAUTION

- Keep the machine away from humidity and dust. Otherwise a fire or an electric shock might occur.

⚠ CAUTION

- Do not place any objects on the machine. Doing so may cause the machine to topple over, possibly resulting in injury.

⚠ CAUTION

- Do not place the machine on an unstable or tilted surface. If it topples over, an injury might occur.

⚠ CAUTION

- Do not place the product or use it in an environment where it might get wet such as from snow, rain, or being near water. Doing so could result in fire or electric shock.

⚠ CAUTION

- Do not put your face or hand near the exhaust vents. Doing so could result in burns or an accident due to hot air coming from the exhaust vents.

⚠ CAUTION

- Do not use the product on soft material such as paper or cloth that might get sucked into the intake vents. Doing so may cause heat buildup inside the product, resulting in malfunction, burns, or fire.

⚠ CAUTION

- Do not place the power cord and connection cable in a way that might cause someone to trip and fall. The product might fall over and cause an injury.

⚠ CAUTION

- Do not place the product in a location where air flow is poor. Doing so may cause fire due to internal components becoming overheated.

⚠ CAUTION

- Do not place or store the product in a location where direct sunlight or heat generation might occur. The heat may deform or wear out the exterior parts or negatively affect internal parts. Doing so could result in fire.

⚠ CAUTION

- Do not place low heat resistant material near the exhaust vents. Hot air may come from the exhaust vents, resulting in damage to the product or an accident.

⚠ CAUTION

- Do not expose the product to salt air or corrosive gas. Also, do not place the product in a laboratory or other location where a chemical reaction might occur. Doing so may cause the product to malfunction.

⚠ CAUTION

- Do not obstruct the machine's vents. Doing so risks fire caused by overheated internal components.

Handling power cords and power cord plugs

This section explains safety precautions about handling power cords and power cord plugs.

⚠ WARNING

- Do not use any power sources other than those that match the specifications shown. Doing so could result in fire or electric shock.

⚠ WARNING

- Do not use any frequencies other than those that match the specifications shown. Doing so could result in fire or electric shock.

⚠ WARNING

- Do not damage, break, or modify the power cord. Also, do not place heavy objects on the power cord, or pull the cord or bend it severely. Doing so could result in fire or electric shock.

⚠ WARNING

- Touching the prongs of the power cable's plug with anything metallic constitutes a fire and electric shock hazard.

⚠ WARNING

- The supplied power cord is for use with this machine only. Do not use it with other appliances. Doing so could result in fire or electric shock.

⚠ WARNING

- It is dangerous to handle the power cord plug with wet hands. Doing so could result in electric shock.

⚠ WARNING

- Be sure to disconnect the plug from the wall outlet at least once a year.
  - There are burn marks on the plug.
  - The prongs on the plug are deformed.
- If any of the above conditions exist, do not use the plug and consult your dealer or service representative. Use of the plug could result in fire or electric shock.

⚠ WARNING

- Be sure to disconnect the power cord from the wall outlet at least once a year.
  - The power cord's inner wires are exposed, broken, etc.
  - The power cord's coating has a crack or dent.
  - When bending the power cord, the power turns off and on.
  - Part of the power cord becomes hot.
  - The power cord is damaged.
- If any of the above conditions exist, do not use the power cord and consult your dealer or service representative. Use of the power cord could result in fire or electric shock.

⚠ WARNING

- Do not use the connection cable if it is deformed, cracked, or damaged. Doing so could result in fire or electric shock. If the connection cable is deformed, cracked, or damaged, contact your service representative to request a replacement cable.

⚠ WARNING

- When using an extension cord or power strip, only connect equipment whose total power consumption is within the power rating for the extension cord or power strip. If the power rating is exceeded, it may cause heat buildup and result in fire.

⚠ WARNING

- Do not place the power cord and connection cable in front of the lens or exhaust vents when the product is turned on. Doing so may result in fire.

⚠ CAUTION

- Push the power plug all the way into the power outlet. Do not use a power outlet with a loose connection. Doing so may result in heat buildup. Plug the power cord in the correct direction into the base. If they are not plugged in correctly, it could result in smoke, fire, or electric shock.

⚠ CAUTION

- If this machine is not going to be used for several days or longer at a time, disconnect its power cord from the wall outlet.

⚠ CAUTION

- When disconnecting the power cord from the wall outlet, always pull the plug, not the cord. Pulling the cord can damage the power cord. Use of damaged power cords could result in fire or electric shock.

⚠ CAUTION

- Be sure to disconnect the plug from the wall outlet and clean the prongs and the area around the prongs at least once a year. Allowing dust to build up on the plug constitutes a fire hazard.

⚠ CAUTION

- When performing maintenance on the machine, always disconnect the power cord from the wall outlet.

Handling the main machine

This section explains safety precautions about handling the main machine.

⚠ WARNING

- If the machine emits smoke or odours, or if it behaves unusually, you must turn off its power immediately. After turning off the power, be sure to disconnect the power cord plug from the wall outlet. Then contact your service representative and report the problem. Do not use the machine. Doing so could result in fire or electric shock.

⚠ WARNING

- If metal objects, or water or other fluids fall inside this machine, you must turn off its power immediately. After turning off the power, be sure to disconnect the power cord plug from the wall outlet. Then contact your service representative and report the problem. Do not use the machine. Doing so could result in fire or electric shock.

⚠ WARNING

- Do not touch this machine if a lightning strike occurs in the immediate vicinity. Doing so could result in electric shock.

⚠ WARNING

- The following explains the warning messages on the plastic bag used in this product's packaging.
  - Keep the polythene materials (bags, etc.) supplied with this machine away from babies and small children at all times. Suffocation can result if polythene materials are brought into contact with the mouth or nose.

⚠ WARNING

- If the machine topples, or if a cover or other part gets broken, you must turn off its power immediately. After turning off the power, be sure to disconnect the power cord plug from the wall outlet. Then contact your service representative and report the problem. Do not use the machine. Doing so could result in fire or electric shock.

⚠ WARNING

- Contact your sales or service representative to clean or replace parts for a projector that is installed on a wall or ceiling.
  - Do not attempt to clean or replace parts for a projector that is installed in a high location on a wall or ceiling. Doing so may cause it to fall down, resulting in an injury.
  - Do not open the lamp cover of a projector that is installed on a wall or ceiling. Doing so may cause the lamp cover to fall down. If the lamp is broken, pieces of glass may fall and cause an injury.

⚠ WARNING

- If a projector is incorrectly installed on a wall or ceiling, it may fall down and cause an injury. Contact your sales or service representative if you want to install a projector on a wall or ceiling.
  - Use brackets that are strong enough to support the projector. The projector weighs about 14.3kg (31.8lb.) (Projector weight with lens).
  - The projector must be installed in a location that is sturdy enough to support the full weight of the projector and brackets.

⚠ CAUTION

- The machine may be very hot after it is turned off, especially the vents and the lower part of the unit where the lamp is located. Avoid touching these areas. Doing so may result in burns.

⚠ CAUTION

- Do not place the product on other equipment or vice versa. Doing so may cause heat buildup inside the product or cause the other equipment to malfunction.

⚠ CAUTION

- Do not increase the volume unless you are listening while increasing the volume. Also, lower the volume before turning off the power, because a loud sound may be emitted when the power is turned on and cause hearing damage.

Handling the machine's interior

This section explains safety precautions about handling the machine's interior.

⚠ WARNING

- Do not remove any covers or screws that are not mentioned in this manual. There are high voltage components inside the product that may cause electric shock. Contact your service representative if any of the product's internal components require maintenance, adjustment, or repair.
- Do not disassemble or modify the product. Doing so may cause injury or malfunction.

⚠ CAUTION

- If the machine's interior is not cleaned regularly, dust will accumulate. Fire and breakdown can result from heavy accumulation of dust inside this machine. Contact your sales or service representative for details about and charges for cleaning the machine's interior.

About the batteries

Explains things that you should follow in regard to the batteries.

⚠ WARNING

- For safe operation, follow the warnings below regarding the batteries used in the remote control. If you use the batteries incorrectly, it may result in fire or injury due to batteries leaking or exploding.
  - Do not use batteries other than the ones specified.
  - Do not mix and use batteries that are different types or that are new and old.
  - Correctly insert batteries according to the polarity (+/-).
  - Do not charge non-rechargeable batteries.
  - Do not heat or throw the batteries into fire or water.
  - Do not connect the positive and negative terminals on a battery with a wire.
  - Remove the batteries from the remote control that are past their suggested use period or that are depleted.
  - Remove the batteries when they will not be used for extended periods.
  - Keep the batteries out of the reach of children. Children may swallow or choke on the batteries. If this happens, contact a doctor immediately.

⚠ WARNING

- What to do if a battery has leaked
  - If leakage from a battery adheres to your skin, rinse it with water immediately, and then contact a doctor.
  - Wipe off the leakage with tissue paper while being careful not to touch it.
  - Soak the tissue paper that you used in water, and then throw it away as burnable trash.

About the lamp

Explains things that you should follow in regard to the lamp.

⚠ WARNING

- Do not look into the lens or vent when the product is on. The bright light may damage your eyes. Be especially careful in an environment with children.

⚠ WARNING

- Before replacing the lamp, turn off the power and wait at least one hour to allow the product to cool completely. If it is not completely cool, you may burn or injure yourself due to the inside of the product and lamp unit being hot. If you replace the lamp without unplugging the power cord from the power outlet, electric shock or explosion may occur.
- Be careful when handling the used lamp so that it does not break. If it breaks, it may cause injury.

⚠ CAUTION

- The product's light uses a mercury vapor lamp that becomes high pressure when it is turned on. The lamp has the following characteristics, so be sure to handle it with care after understanding the contents.
  - Deterioration or shock can cause the lamp's life span to end or the lamp to explode. If the lamp explodes, it may make a big noise.
  - The time that it takes for the lamp to reach its life span or explode depends on each individual lamp and its operating conditions. It is possible that it might explode the first time it is used.
  - If you use the lamp past its replacement period, the possibility of explosion increases.
  - If the lamp explodes, broken glass pieces may be scattered around the inside of the product and ejected from the vent or other opening.
  - If the lamp explodes, a very small amount of mercury vapor in the lamp tube and broken glass pieces may be ejected from the vents or other opening.

⚠ CAUTION

- What to do if a lamp has exploded
  - If the lamp explodes, remove the power cord from the product, leave the room while making sure it is thoroughly ventilated.
  - If the lamp explodes and you think that you have gotten glass particles or mercury vapor in your eyes or have inhaled either, contact a doctor immediately.
  - Clean up the area around the product completely while being careful not to get injured from any broken glass pieces.
  - Throw away any food that was near the product.
  - Ask your service representative to replace the lamp and inspect the product.

⚠ CAUTION

- Do not block the projection light when it is on. If you do so, the part that is blocking the projection light may get quite hot and deform, deteriorate or cause a burn or fire. The reflected light may make the lens hot and cause a product failure. To temporarily suspend projection, select the mute function. To suspend longer, turn off the product.

⚠ CAUTION

- Be sure to always use a dedicated replacement lamp that is new when replacing the lamp. If you use a lamp that is not dedicated, it may result in an explosion and injury.

Moving

This section explains safety precautions about moving the machine.

⚠ CAUTION

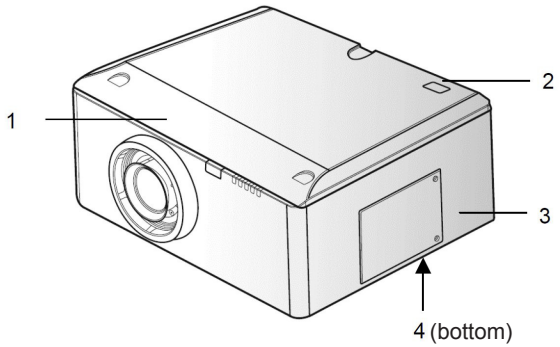
- Unplug the power cord from the wall outlet before you move the machine. While moving the machine, take care that the power cord is not damaged under the machine. Failing to take these precautions could result in fire or electric shock.

Safety Labels of This Machine

Positions of WARNING and CAUTION labels

This machine has labels for WARNING and CAUTION at the positions shown below. For safety, please follow the instructions and handle the machine as indicated.

Main unit



1

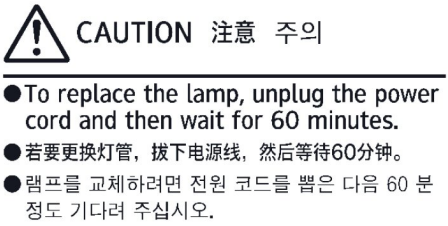
Do not look into the lens when the product is on. The bright light may damage your eyes.

Do not place anything in front of the lens. The object may become very hot and cause a fire or burn. To blank the image temporarily, turn on the mute function.

2

Do not put your face or hand near the exhaust vents. Doing so could result in burns or an accident due to hot air coming from the exhaust vents.

3


CAUTION 注意 주의
●To replace the lamp, unplug the power cord and then wait for 60 minutes.
●若要更换灯管，拔下电源线，然后等待60分钟。
●램프를 교체하려면 전원 코드를 뽑은 다음 60 분 정도 기다려 주십시오.

To replace the lamp, first unplug the power cord then wait for more than 60 minutes. The lamp might be broken. Be careful of pieces of broken glass.

4

WARNING 警告 경고
●Do not remove any screws except the lamp cover screws.
Do not block or cover the vents.
●除了灯盖螺丝以外，不要拆除任何螺丝。
不要堵塞或覆盖通风孔。
●램프 커버 나사 이외의 다른 나사는 분리하지 마십시오.
환기구를 차단하거나 덮지 마십시오.

Do not remove any screws except the lamp cover screws.

Do not block or cover the vents.

Power Switch Symbols

The meanings of the symbols for the switches on this machine are as follows:

■ ⏻ : STANDBY

Laws and Regulations

User Information on Electrical and Electronic Equipment

If you wish to discard this product, please contact your local authorities, the shop where you bought this product, your local dealer or sales/service representatives.

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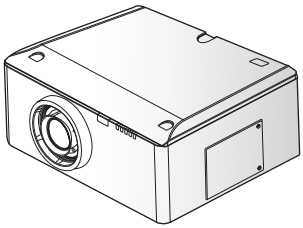
Introduction

Product Features

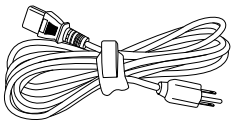
- XGA (1024x768), support resolution: Up to WUXGA @60Hz (Reduced Blanking) and UXGA @60Hz
- Single lamp system
- Power Zoom/Focus
- Power lens shift
- Dynamic Aperture
- 10W x 1 speaker
- Filter module
- Support PIP/POP function
- Support network management for remote control and monitoring

Package Overview

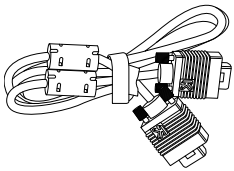
Unpack and inspect the box contents to ensure all parts listed below are in the box. If something is missing, please contact our customer service.



Projector with lens cover

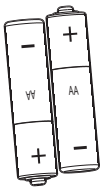


Power Cord



VGA Cable

Remote Control



AA (R6) Batteries x 2
(For remote control)

Documentation:

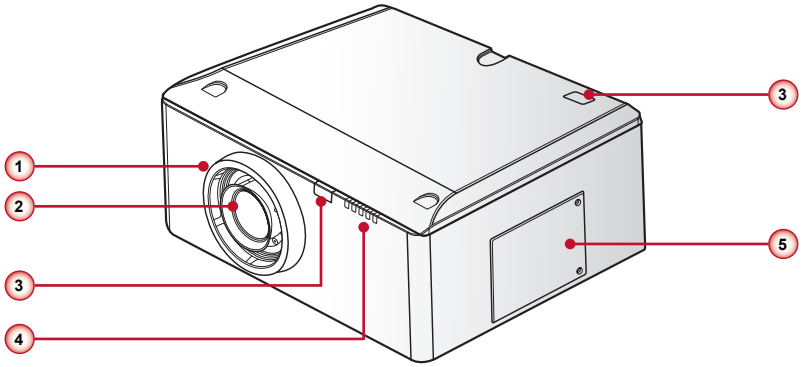
- User's Manual (CD and Paper)
- Warranty Card

NOTE

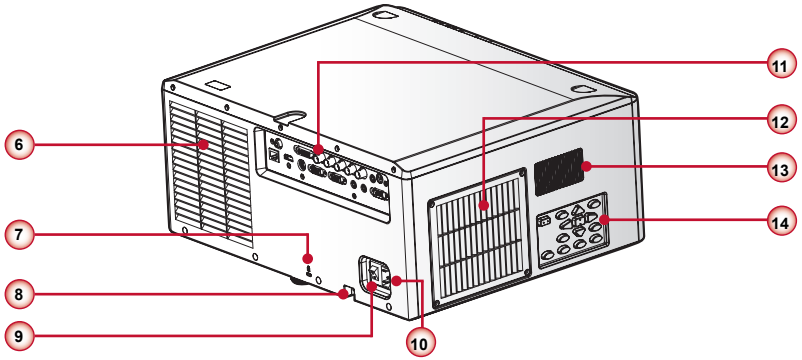
■ *Due to different applications in each Country, some regions may have different accessories.*

Product Overview

Main Unit



(Front View)

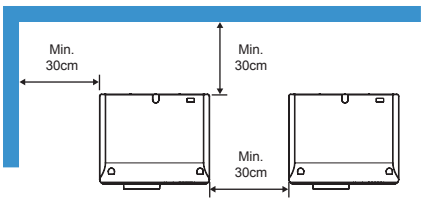


(Rear View)

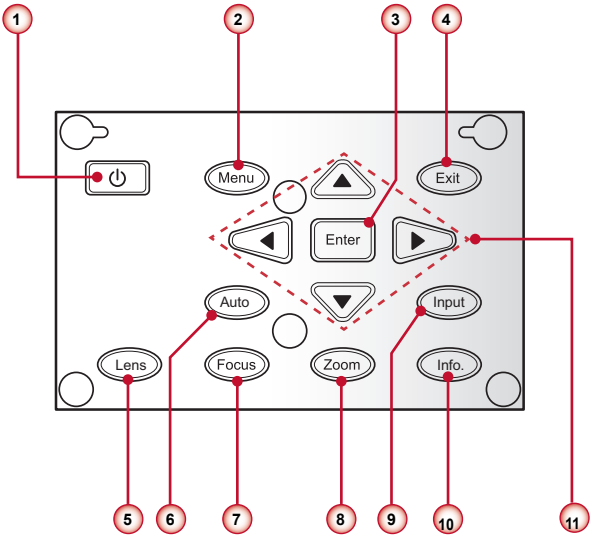
1. Lens Ring
2. Zoom Lens
3. IR Receivers
4. LED Indicators
5. Lamp Door
6. Outlet Vent
7. Kensington Lock
8. Security Bar
9. Power Switch
10. Power Connector
11. Connector Panel
12. Inlet Vent & Filter
13. Audio Vent
14. Keypad Panel

NOTE

■ *Do not block projector in/out air vents and keep 30cm clearance around vents for air flow concern.*

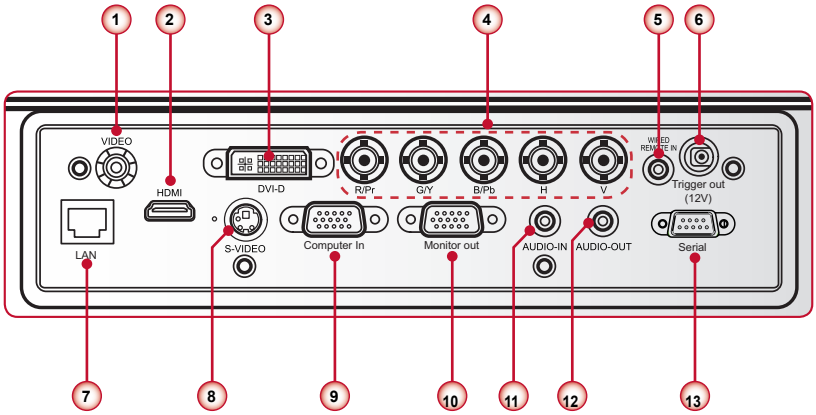


Control Panel



1. ⏻ / Power key
2. Menu key
3. Enter key
4. Exit key
5. Lens key
6. Auto key
7. Focus key
8. Zoom key
9. Input key
10. Info key
11. Four directional select keys

Connection Ports



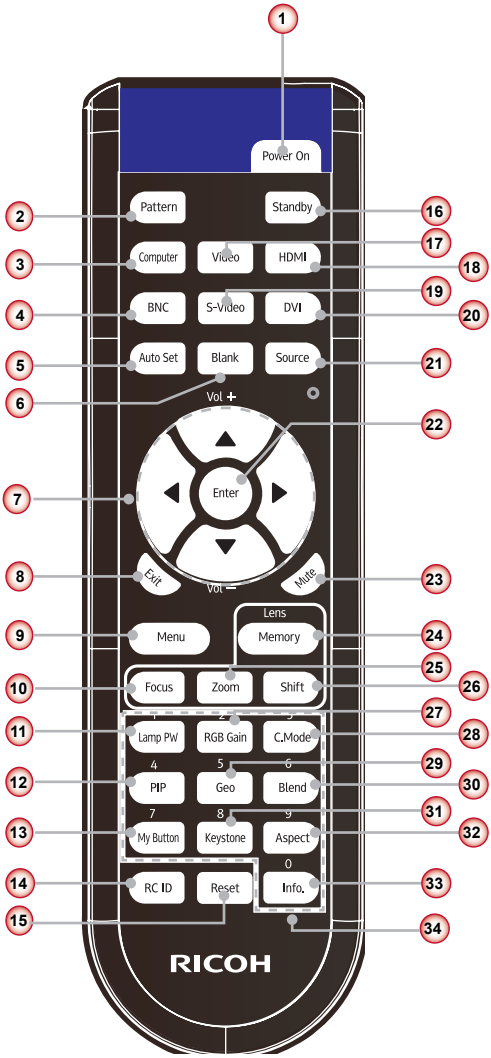
1. Composite Video Input Connector
2. HDMI Connector
3. DVI-D Connector
4. BNC Connector
5. Wired Remote Input Connector
6. Trigger out 12V Connector
7. LAN Connector
8. S-Video Input Connector
9. Computer In Connector
10. Monitor out Connector
11. Audio Input Connector
12. Audio Output Connector
13. Serial Connector (9-pin Dsub Type)

NOTE

- *Use cross cable for serial control with a PC.*

Remote Control

1. Power ON
   Power on the projector.
2. Pattern
   Display a test pattern.
3. Computer
   Switch to Computer source.
4. BNC
   Switch to Component video source.
5. Auto set
   Auto adjust projector with source.
6. Blank
   Switch to a blank screen.
7. Four Directional Select Keys
   Press up, down, left, right direction buttons to select items or make adjustments.
8. Exit
   Exit a menu.
9. Menu
   Launch the OSD main menu.
10. Focus
    Adjust the lens focus.
11. Lamp PW
    Adjust lamp power.
12. PIP
    Launch the Picture-in-Picture function.
13. MyButton
    Launch a user-defined setting.
14. RC ID
    Set the remote control ID.
15. Reset
    Reset the projector to factory default settings.
16. Standby
    Turn off the projector.
17. Video
    Switch to Composite Video source.



18. HDMI
    Switch to HDMI source.
19. S-Video
    Switch to S-Video source.
20. DVI
    Switch to DVI source.
21. Source
    Automatically scans for connected source.
22. Enter
    Confirm your item selection.
23. Mute
    Turn the projector audio off/on.
24. Memory
    Save the current lens shift settings to the memory.
25. Zoom
    Adjust the lens zoom function.
26. Shift
    Adjust the lens shift up/down/left/right.
27. RGB Gain
    Enter the color management setting page.
28. C.Mode
    Select the display mode (Presentation, Bright, Movie, sRGB, DICOM SIM, and User).
29. Geo
    Enable geometric correction function.
30. Blend
    Adjust display blend function.
31. Keystone
    Adjust image distortion caused by tilting the projector.
32. Aspect
    Adjust the aspect ratio of the projected screen.
33. Information (i)
    Display the projector information.
34. Numeric Keypad
    Press “0~9” to input a numeric value such as a password in the “Security” settings.

■ *When using the number keypad for password input, do not use “0” as part of the password.*

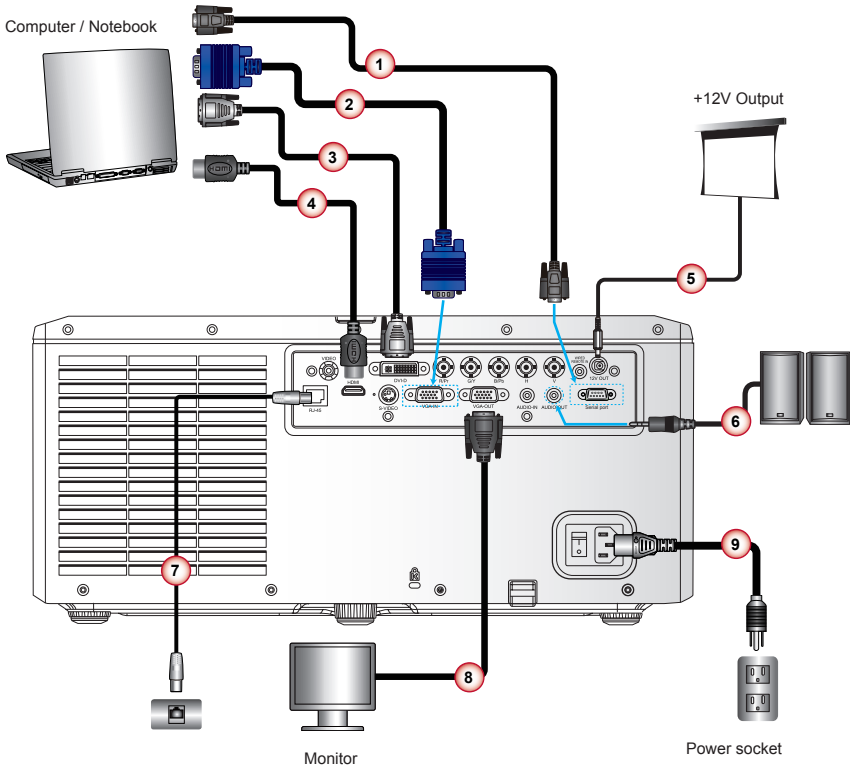
Installation

Installing the Projector Lens

Please contact to the dealer for installation of the projection lens.

⚠ Warning: Do not transport the projector with any lens installed.

Connecting to Computer/Notebook



❖ Plug for 12V DC jack

Plug: ID Φ 1.7mm
OD Φ 4.0mm

❖ Plug for wired remote at projector side

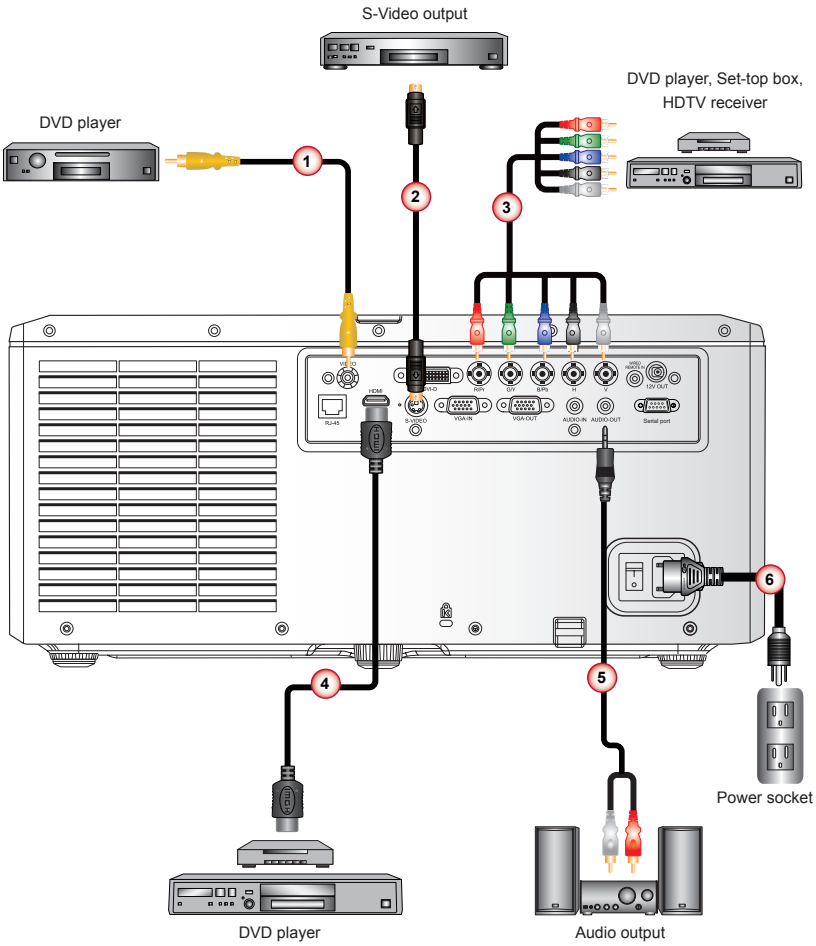
❖ Plug for wired remote at remote control side

1. Serial Cable
2. VGA Cable
3. DVI-D Cable
4. HDMI Cable
5. 12V DC Jack
6. Audio Cable
7. LAN (RJ45) Cable
8. VGA Cable
9. Power Cord

NOTE

- *Maximum output current of the trigger out is 200mA. This can't drive a motor directly.*
- *Due to the difference in applications for each country, some regions may have different accessories.*

Connecting to Video Sources



1. Composite Video cable
2. S-Video Cable
3. BNC Cable
4. HDMI Cable
5. Audio Cable
6. Power Cord

NOTE

■ *Due to the difference in applications for each country, some regions may have different accessories.*

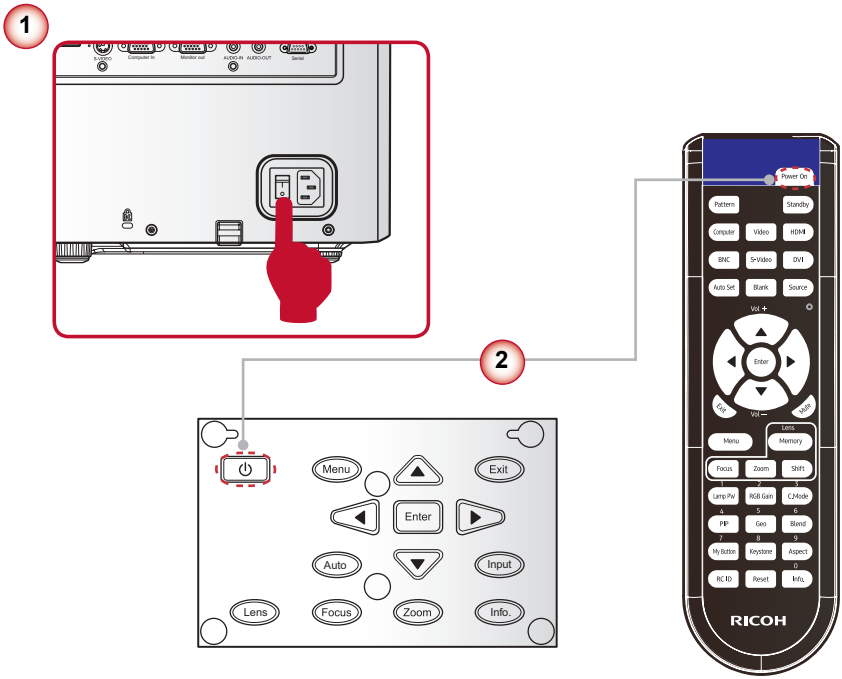
Powering On/Off the Projector

Powering On the Projector

1. Securely connect the power cord and signal cable. Power on the switch ① and the Power LED flashes Blue.
2. Turn on the lamp by pressing the " ⏻ " button on the control panel of the projector or "Power On" button on the remote control ②. The Power LED will turn blue.

   The startup screen will display in approximately 10 seconds. The first time you use the projector, you will be asked to select the preferred language and power saving mode.
3. Turn on and connect the source that you want to display on the screen (computer, notebook, video player, etc). The projector will detect the source automatically. If not, push the menu button and go to "OPTIONS".
   Make sure that "Auto Source" has been set to "Off".

   - If you connect multiple sources at the same time, press the direct source buttons on the control panel or on the remote control to switch between inputs.

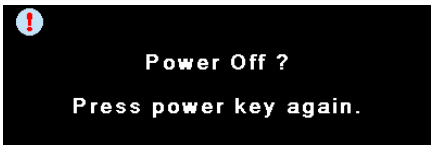


NOTE

■ *Turn on the projector first and then select the signal sources.*

Powering Off the Projector

1. Press the “Standby” button on the remote control or the “ ⏻ ” button on the control panel to turn off the projector ①. The following message will be displayed on the screen.



   Press the “Standby” button on the remote control or the “ ⏻ ” button on the control panel again ① to confirm otherwise the message will disappear after 15 seconds. When you press for the second time, the projector will shut down.

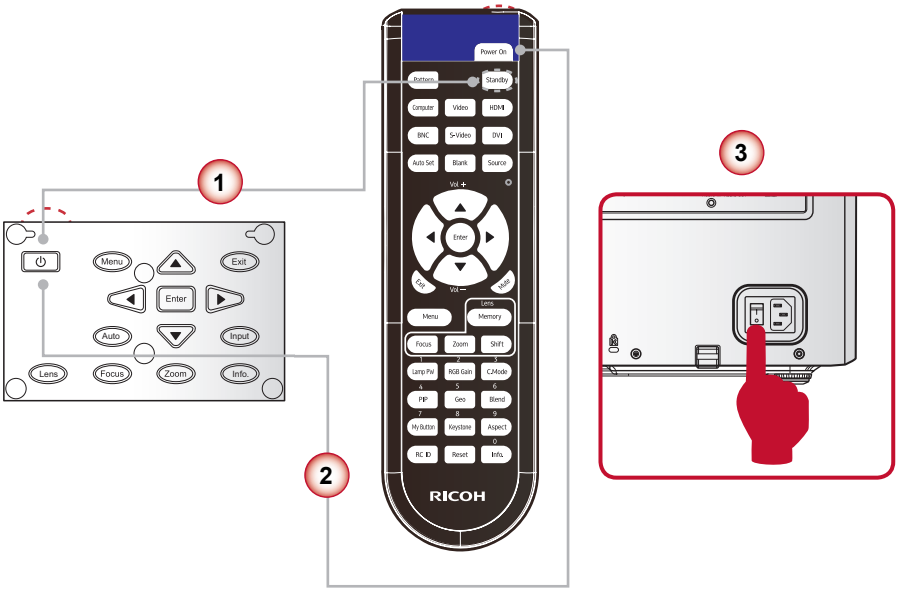
2. The cooling fans will complete the cooling cycle for about 60 seconds and the POWER LED will flash Blue. The projector has entered standby mode. If you wish to turn the projector back on, you must wait until the projector has completed the cooling cycle and has entered standby mode. Once in standby mode, simply press the “ ⏻ ” button on the control panel of the projector or “Power On” button on the remote control to restart the projector. ②

3. Power off the switch ③.

4. Disconnect the power cord from the electrical outlet and from the projector.

NOTE

■ *Do not turn on the projector immediately following the power off procedure.*



Warning Indicator

When the warning indicators (see below) come on, the projector will automatically shutdown:

- “LAMP” LED indicator is lit red and the “ERROR” LED indicator flashes red. This indicates that the lamp has failed.
- “TEMP” LED indicator is lit red and the “ERROR” LED indicator flashes red. This indicates the projector has overheated. Under normal conditions, the projector can be switched back on.
- “TEMP” LED indicator flashes red and the “ERROR” LED indicator flashes red. This indicates that the fan has failed.
- “ERROR” LED indicator flashes red and the “FILTER” LED indicator flashes red. This indicates that the filter needs replacement.
- “FILTER” LED indicator flashes red. This indicates that the filter needs to be cleaned.

Unplug the power cord from the projector, wait for 30 seconds and try again. If the warning indicator light up again, please contact your nearest service center for assistance.

LED Lighting Message

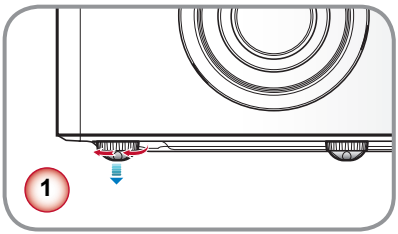
Message	Power LED		Lamp LED	Temp LED	Error LED	Filter LED
	Red	Blue	Red	Red	Red	Red
Standby State (LAN off)		Flashing				
Standby State (LAN On)		Flashing				
Power on & Lamp lighting		Steady light				
Power off (Cooling)		Flashing				
Error (Lamp fail)			Steady light		Flashing	
Error (Over Temp)				Steady light	Flashing	
Error (Fan fail)				Flashing	Flashing	
Error (Filter Switch)					Flashing	Flashing
Error (Filter Cleaning)						Flashing

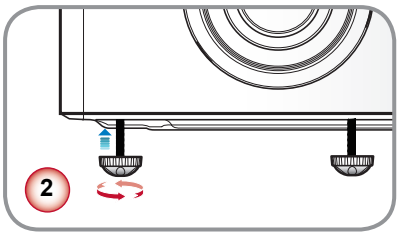
Adjusting the Projected Image

Adjusting the Projector's Height

The projector is equipped with elevator rubber feet for adjusting the image height.

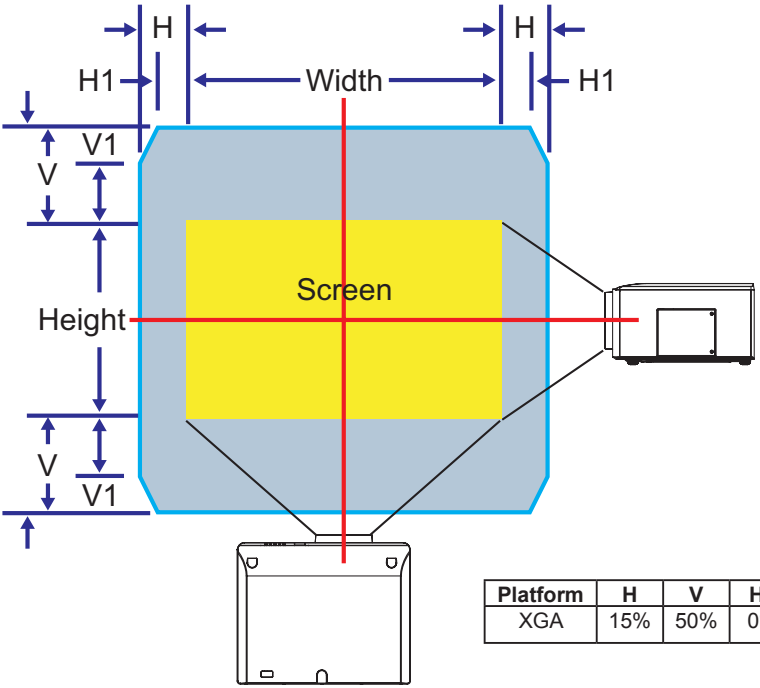
1. Locate the adjustable foot you wish to modify on the underside of the projector.
2. Rotate the adjustable ring clockwise to raise the projector or counter clockwise to lower it. Repeat with the remaining feet as needed.





Adjusting the Projecting Image's Position

To determine where to position the projector, consider the size and shape of your screen, the location of your power outlets, and the distance between the projector and the rest of your equipment.



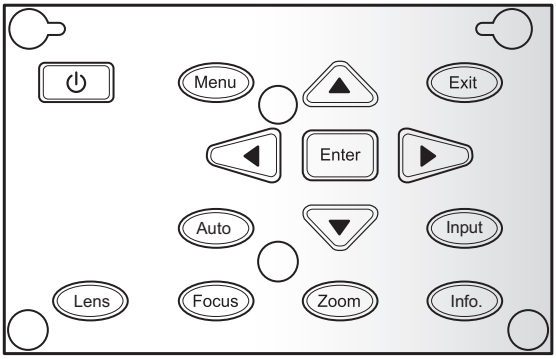
Platform	H	V	H1	V1
XGA	15%	50%	0%	20%

Platform			XGA (4:3)					
DMD			0.7"					
Projection Lens			Replacement Lens Type 5		Standard Lens Type2		Replacement Lens Type6	
			Wide Zoom		Standard		Long Zoom	
Throw Ratio			0.99-1.26		1.26-1.58		1.58-3.00	
Zoom Ratio			1.28X		1.25X		1.9X	
Throw Distance			1.01~7.68m		1.28~9.63m		1.61~18.29m	
Projection screen size			Projection distance (m)					
Throw Ratio			0.99	1.26	1.26	1.58	1.58	3.00
Diagonal (inch)	Height (m)	Width (m)	Min (m)	Max (m)	Min (m)	Max (m)	Min (m)	Max (m)
50	0.76	1.02	1.01	1.28	1.28	1.61	1.61	3.05
60	0.91	1.22	1.21	1.54	1.54	1.93	1.93	3.66
70	1.07	1.42	1.41	1.79	1.79	2.25	2.25	4.27
80	1.22	1.63	1.61	2.05	2.05	2.57	2.57	4.88
90	1.37	1.83	1.81	2.30	2.30	2.89	2.89	5.49

100	1.52	2.03	2.01	2.56	2.56	3.21	3.21	6.10
110	1.68	2.24	2.21	2.82	2.82	3.53	3.53	6.71
120	1.83	2.44	2.41	3.07	3.07	3.85	3.85	7.32
130	1.98	2.64	2.62	3.33	3.33	4.17	4.17	7.92
140	2.13	2.84	2.82	3.58	3.58	4.49	4.49	8.53
150	2.29	3.05	3.02	3.84	3.84	4.82	4.82	9.14
160	2.44	3.25	3.22	4.10	4.10	5.14	5.14	9.75
170	2.59	3.45	3.42	4.35	4.35	5.46	5.46	10.36
180	2.74	3.66	3.62	4.61	4.61	5.78	5.78	10.97
190	2.90	3.86	3.82	4.86	4.86	6.10	6.10	11.58
200	3.05	4.06	4.02	5.12	5.12	6.42	6.42	12.19
250	3.81	5.08	5.03	6.40	6.40	8.03	8.03	15.24
300	4.57	6.10	6.04	7.68	7.68	9.63	9.63	18.29

User Controls

Using the Control Panel



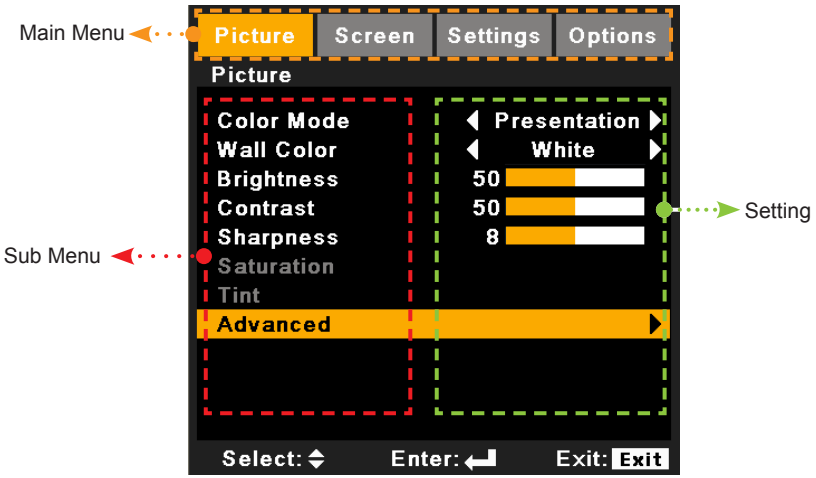
Name	Description
Power ⏻	Turn the projector on/off.
Menu	Launch the on-screen display (OSD).
Exit	Exit a menu.
Enter	Confirm a selected item.
Four Directional Select Keys	1. Use ▲▼◄► to select items or make adjustments to your selection. 2. ▲/▼act as short hot keys for Keystone +/- adjustment.
Auto	Synchronize the projector with the input source.
Input	Select an input signal.
Lens	Adjust the lens shift up/down/left/right.
Focus	Adjust the lens focus function.
Zoom	Adjust the lens zoom function.
Info.	Display the projector’s information.

On-screen Display Menus

The Projector has multilingual On-screen Display menus that allow you to make image adjustments and change a variety of settings. The projector will automatically detect the source.

How to operate

1. To open the OSD menu, press “Menu” on the Remote Control or Control Panel.
2. When OSD is displayed, use ▲▼ keys to select any item in the main menu. While making a selection on a particular page, press “Enter” key to enter sub menu.
3. Use ▲▼ keys to select the desired item in the sub menu and then press “Enter” key to view further settings. Adjust the settings by ◄► key.
4. Select the next item to be adjusted in the sub menu and adjust as described above.
5. Press “Enter” to confirm, and the screen will return to the main menu.
6. To exit, press “Menu” again. The OSD menu will close and the projector will automatically save the new settings.



Structure

■ *Please note that the on-screen display (OSD) menus vary according to the signal type selected and the projector model you are using.*

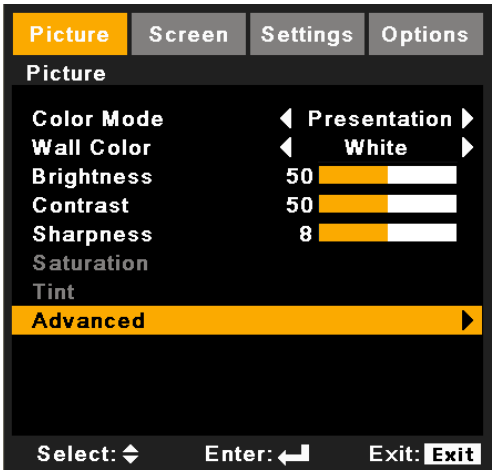
Main Menu	Sub Menu		Settings
PICTURE	Color Mode		Presentation / Bright / Movie / sRGB / DICOM SIM. / User
	Wall Color		White / Light Yellow / Light Blue / Pink / Dark Green
	Brightness		
	Contrast		
	Sharpness		
	Saturation		
	Tint		
	Advanced	Noise Reduction	
		BrilliantColor™	On / Off
		Gamma	Film / Video / Graphics / Standard
		DynamicBlack	On / Off
		Color Temp.	Warm / Medium / Cool
		Color Space	Auto / RGB / YUV
		Color Settings	Red Gain / Green Gain / Blue Gain / Red Bias / Green Bias / Blue Bias / Reset / Exit
		Input Source	HDMI / DVI / Computer / BNC / S-Video / Video / Exit
		Exit	
SCREEN	Aspect		4:3 / 16:9 / Native / Auto
	Zoom		
	Overscan		
	H Image Shift		
	V Image Shift		
	Geometry	PC Mode	Off / On
		Warp	Off / On
		Keystone	Horizontal / Vertical / Pin Cushion/Barrel / Reset / Exit
		4- Corner	Corner / X Offset / Y Offset / Reset / Exit
		Curve	Point 1 / Point 2 / Point 3 / Point 4 / Point 5/ Point 6 / Point 7 / Point 8 / Point 9 / Reset / Exit
		Rotation	Rotation / Pin Cushion/Barrel / Reset / Exit
	V Keystone		

Main Menu	Sub Menu	Settings	
SCREEN	PIP / POP	Screen	
		PIP Location	
		PIP Size	1/16 / 1/25 / 1/36
		PIP/POP Source	HDMI / VGA or DVI / S-Video / Video / BNC
		Swap	
		Exit	
SETTING	Language		English / German / French / Spanish /Italian / Russian / Portuguese / Swedish / Simplified Chinese / Korean / Traditional Chinese / Turkish / Polish / Japanese / Norwegian / Exit
	Projection		Front-Desktop / Rear-Desktop / Front-Ceiling / Rear-Ceiling
	Menu Location		Top Left / Top Right / Center / Bottom Left / Bottom Right
	Lens Function	Zoom	Lock / Unlock
		Focus	Lock / Unlock
		Lens Shift	Lock / Unlock
		Lens Position	Set 1 / Set 2 / Set 3
		Lens Calibration	Yes / No
		Exit	
	Security	Security Timer	Month / Day / Hour / Exit
		Change Password	
		Security	On / Off
		Exit	
	Signal (RGB)	Frequency	
		Phase	
		H. Position	
		V. Position	
		Automatic	Enable / Disable
		Exit	
	Signal (Video)	White Level	
		Black Level	
		Saturation	
		IRE	
		Exit	
	Projector No		

Main Menu	Sub Menu	Settings	
SETTING	Audio Settings	Internal Speaker	On / Off
		Mute	On / Off
		Volume	
		Exit	
	Advanced	Logo	Default/Neutral
		Closed Captioning	CC1 / CC2 / CC3 / CC4 / Off
		Exit	
	Network	Network State	
		DHCP	
		IP Address	
		Subnet Mask	
		Gateway	
		DNS	
		Apply	
		Control System IP Address	
		Control System IP ID	
		Control System Port	
		Exit	
	Image Blending	Blending	On / Off
		Crop	On / Off
		Overlap	Left Start / Left End / Right Start / Right End / Up Start / Up End / Down Start / Down End
		Bright Adj.	Overlap / Non Overlap
		Gamma	1.8 /2.0 / 2.2 / 2.6

Main Menu	Sub Menu	Settings	
OPTIONS	Auto Source		On / Off
	High Altitude		On / Off
	Status Hide		On / Off
	Keypad Lock		Lock / Unlock
	Test Pattern		None / Grid / White
	Background Color		Blue / Black / Red / Green / White
	Lamp Settings	Lamp Hour	
		Lamp Reminder	On / Off
		Lamp Mode	Normal / ECO / Advanced
		Lamp Reset	Yes / No
		Exit	
	Remote Settings	My Button	BrilliantColor / Gamma / DynamicBlack / Color Temp. / Projection / Projector ID / HDMI Cable
		Top IR Function	On / Off
		Front IR Function	On / Off
		Remote Code	
		Exit	
	12V Trigger		On / Off
	Advanced	Direct Power On	On / Off
		Auto Power Off	
		Sleep Timer	
		Standby Mode	LAN On / LAN Off
		Baudrate	9600/19200/38400
		Exit	
	HDMI Cable		Normal / Long / Short
	Information		
	Reset		Yes / No

PICTURE



Color Mode

There are many factory presets optimized for various types of images.

- Presentation: Good color and brightness for PC input.
- Bright: Maximum brightness for PC input.
- Movie: For home theater.
- sRGB: Standardised accurate color.
- DICOM SIM.: This display mode simulates the greyscale/gamma performance of equipment used for “Digital Imaging and Communications in Medicine” (DICOM).

  IMPORTANT: This mode should NEVER be used for medical diagnosis, it is for education/ training purposes only.

- User: User’s settings.

Wall Color

Select a similar preset color of the colored wall, in order to correct the color of the projected image as if it is projected on a white screen.

Available options: White / Light Yellow / Light Blue / Pink / Dark Green.

Brightness

Adjust the brightness of the image.

- Press the ◄ button to darken image.
- Press the ► button to lighten the image.

Contrast

The contrast controls the degree of difference between the lightest and the darkest parts of the picture. Adjusting the contrast changes the amount of black and white in the image.

- Press the ◄ button to decrease the contrast.
- Press the ► button to increase the contrast.

Sharpness

Adjust the sharpness of the image.

- Press the ◄ button to decrease the sharpness.
- Press the ► button to increase the sharpness.

Saturation

Adjust a video image from black and white to fully saturated color.

- Press the ◄ button to decrease the color saturation in the image.
- Press the ► to increase the color saturation in the image.

Tint

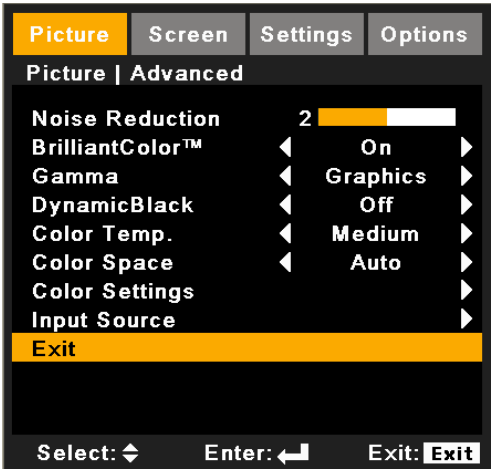
Adjust the color balance of red and green.

- Press the ◄ button to increase the amount of green in the image.
- Press the ► button to increase the amount of red in the image.

NOTE

■ *"Color" and "Tint" are only supported for video, S-video and component sources.*

PICTURE | Advanced



Noise Reduction

The motion Adaptive Noise Reduction reduces the amount of visible noise interlaced signals. The range is from “0” to “10”. (0: Off)

BrilliantColor™

Enable the BrilliantColor™ function to enhance the brightness while providing true, more vibrant colors in picture.

Gamma

This allows you to choose a gamma table that has been finetuned to bring out the best image quality for the input.

- Film: for home theater.
- Video: for video or TV source.
- Graphics: for image source.
- Standard: for standardized setting.

DynamicBlack

DynamicBlack enables the projector to automatically optimize the display of dark movie scenes enabling them to be shown in incredible detail.

Color Temp.

If set to cold temperature, the image looks more blueish (cold image). If set to warm temperature, the image looks more reddish (warm image).

Color Space

Select an appropriate color matrix type from AUTO, RGB, RGB(0-255), RGB(16-235) or YUV.

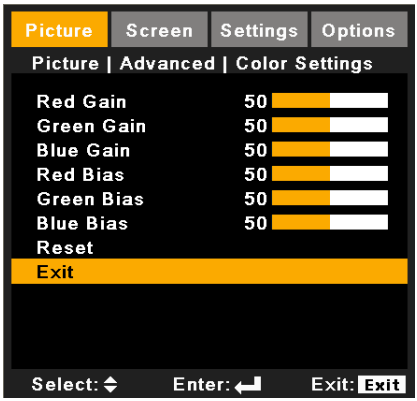
NOTE

- *"RGB(0-255)" and "RGB(16-235)" are only supported for HDMI source.*

Color Settings

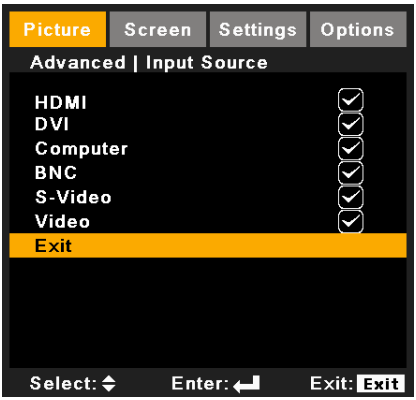
Press ↵ into the next menu and then use ▲ or ▼ to select item.

- Red Gain/Green Gain/Blue Gain/Red Bias/Green Bias/Blue Bias: Use ◄ or ► to Red, Green, or Blue for Gain (contrast) and Bias (brightness).
- Reset: Choose "Yes" to return the factory default settings for color adjustments.

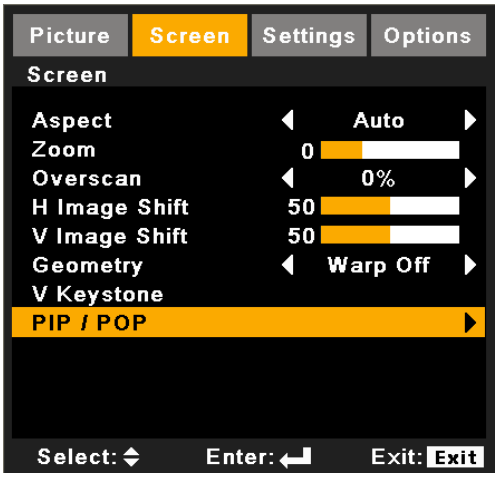


Input Source

Use this option to enable / disable input sources. Press ↵ to enter the sub menu and select which sources you require. Press "Enter" to finalize the selection. The projector will not search for inputs that are not selected.



SCREEN



Aspect

Use this function to choose your desired aspect ratio.

- 4:3: This format is for 4:3 aspect input sources.
- 16:9: This format is for 16:9 aspect input sources, like HDTV and DVD enhanced for Wide screen TV.
- Native: This format displays the original image without any scaling.
- Auto: Automatically selects the appropriate display format.

Zoom

- Press the ◄ button to reduce the size of an image.
- Press the ► button to magnify an image on the projection screen.

Overscan

Overscan function removes the noise in a video image. Overscan the image to remove video encoding noise on the edge of video source.

NOTE

- *Each I/O has different settings of "Overscan".*
- *"Overscan" and "Zoom" can't work at same time.*

H Image Shift

Shift the projected image position horizontally.

V Image Shift

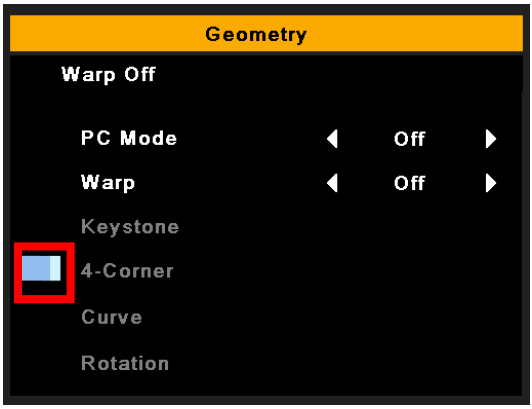
Shift the projected image position vertically.

V Keystone

Press the ◄ or ► to adjust image distortion vertically and make a squarer image.

- *This function is not available when option board type1 is equipped.*
- *Keystone can be adjusted in "SCREEN"-"Geometry"-"Keystone" in such case.*
- *Projected picture can't be adjusted square by V keystone when lens is shifted from the center.*

SCREEN | Geometry



- *This function is available when option board type1 is equipped.*

PC Mode

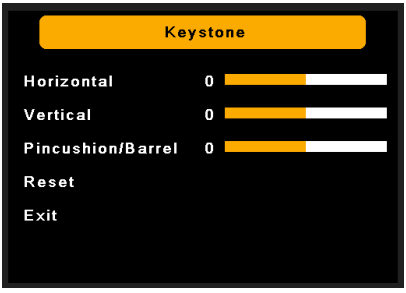
Enable RJ45 control with PC software that allows user to control geometry.

Warp

Enable the Geometry function and control by OSD.

Keystone

This allows you to correct the keystone distortion.



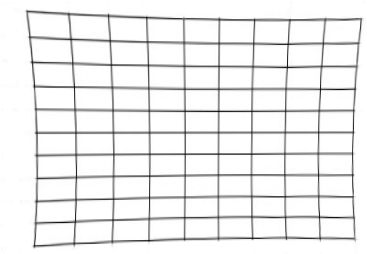
- Horizontal: Press the ◄ or ► to adjust the keystone horizontally and make a squarer image.
- Vertical: Press the ◄ or ► to adjust the keystone vertically and make a squarer image.

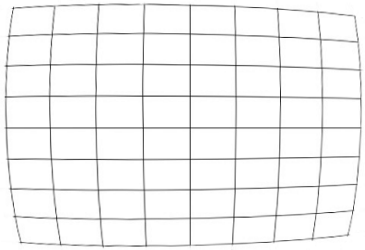
Resolution	Degrees of keystone Correction	
	Horizontal	Vertical
XGA	+/- 40	+/- 40

NOTE

■ *Projected picture can't be adjusted square by keystone when lens is shifted from the center. Use 4-Corner adjustment instead of keystone in such case.*

- Pin Cushion/Barrel: Press the ◄ or ► to adjust the pincushion/barrel distortion. +/- 20% pincushion and barrel distortion correction.

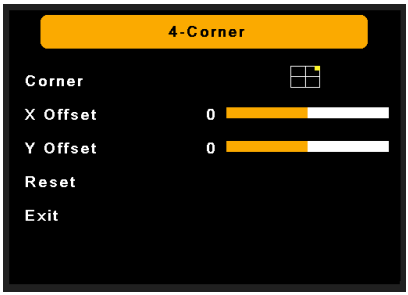


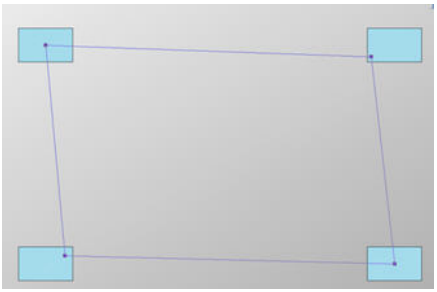


- Reset: Return to the default setting.

4-Corner

This allows you to correct the trapezoidal distortion.

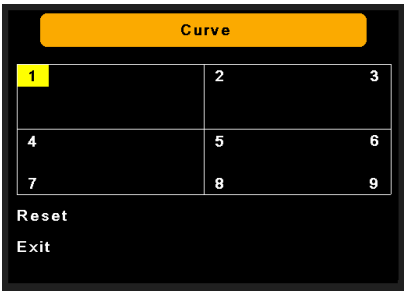


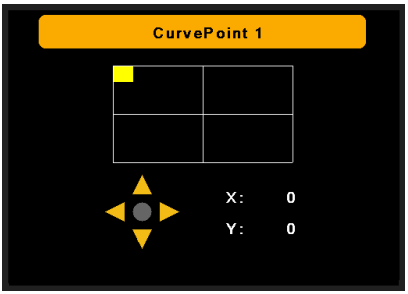


- 4 Corner position adjustments: Top Left, Bottom Left, Top Right, Bottom Right and All. Maximum is 5%.
- Press the ◄ or ► to adjust x/y offset of each corner image.

Curve

This allows you to adjust the curve of point 1~9.

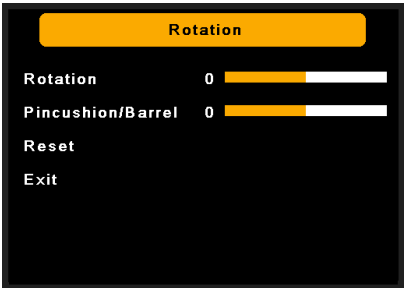




- The screen is separated into 4 (2x2) grids and you can adjust every point of grids.

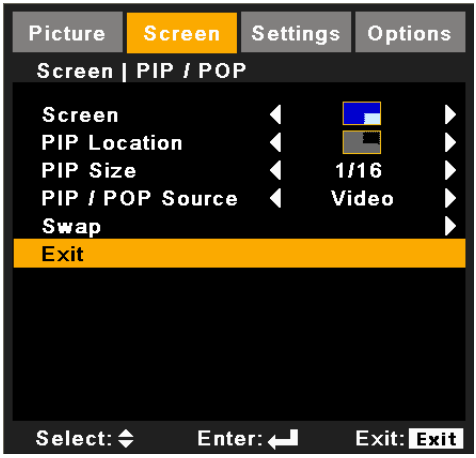
Rotation

This allows you to level the rotated image.



- Rotation: Press the ◄ or ► to adjust the angle of image. Rotation angles can reach to +/- 90 degree.
- Pin Cushion/Barrel: Press the ◄ or ► to adjust the pincushion/barrel distortion. +/- 20% pincushion and barrel distortion correction.
- Reset: Return to the default setting.

SCREEN | PIP / POP



Screen

- Single Screen: Projection single window.
- PIP Screen: Main source is at large window; PIP source is at small window and displays in the corner of the main window.
- POP Screen: Main source is at the left window and POP source is at the right widow, they are equal sizes and side by side.

PIP Location

Choose the PIP screen position on the display screen.

PIP Size

Choose the PIP size from 1/16, 1/25 or 1/36 on the display screen.

PIP / POP Source

Choose the source to switch PIP/POP window source.

Swap

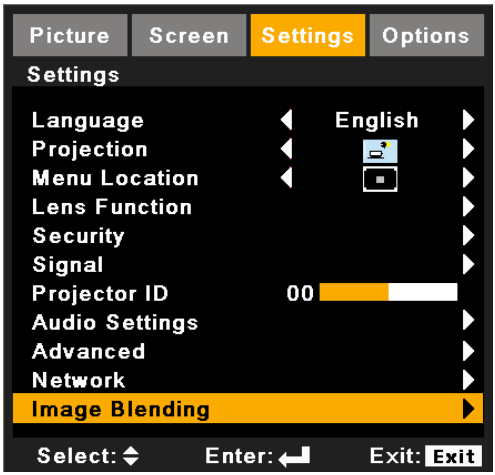
Press to swap the sources of main window and PIP/POP window.
Some source/signal combinations may not be compatible with PIP/POP function.
Please refer to the table below:

PIP/POP source	Main Source					
	HDMI	Computer	DVI-D	BNC	S-video	Video
HDMI			V	V	V	V
Computer			V	V	V	V
DVI-D	V	V				
BNC	V	V				
S-video	V	V				
Video	V	V				

NOTE: Computer and BNC can support Component.

- *Remote control function when PIP is on:*
  Source key: Change main window's source.
  Direct input source keys: Change the source in a window which signal in the same group (HDMI/Computer or DVI/BNC/S-video/Video) is displayed

SETTING



Language

Choose the multilingual OSD menu. Press ◄ or ► into the sub menu and then use the ▲ or ▼ to select your preferred language. Press “Enter” to finalize the selection.

Projection

- Front-Desktop

  This is the default selection. The image is projected straight on the screen.

- Rear-Desktop

  When selected, the image will appear reversed.

- Front-Ceiling

  When selected, the image will turn upside down.

- Rear-Ceiling

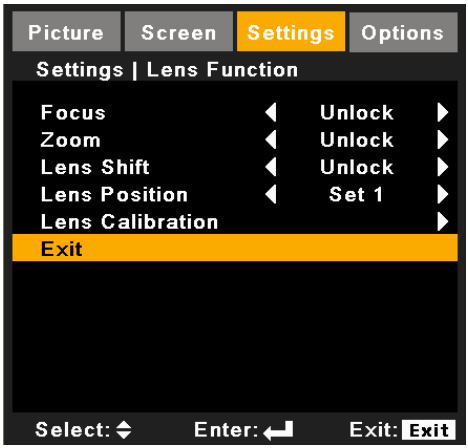
  When selected, the image will appear reversed in upside down position.

- *Rear-Desktop and Rear-Ceiling are to be used with a translucent screen.*

Menu Location

Choose the menu location on the display screen.

SETTING | Lens Function



Focus

Adjust focus function on the projected image.

Zoom

Adjust zoom function on the projected image.

Lens Shift

Shift the projected image.

- Lock: This function can not be used by user.
- Unlock: This function can be used by user.

Lens Calibration

Perform calibration and return lens to the center position.

SETTING | Security

Security Timer

Use this function to set the how long (Month/Day/Hour) the projector can be used. Once this time has elapsed you will be requested to enter your password again.

Change Password

- First time:
  1. Press "↵" to set the password.
  2. The password has to be 4 digits.
  3. Use number button on the remote to enter your new password and then press "↵" key to confirm your password.
- Change Password:
  1. Press "↵" to input old password.
  2. Use number button to enter current password and then press "↵" to confirm.
  3. Enter new password (4 digits in length) using the number buttons on the remote, then press "↵" to confirm.
  4. Enter new password again and press "↵" to confirm.
- If the incorrect password is entered 3 times, the projector will automatically shut down.
- If you have forgotten your password, please contact the dealer for support.

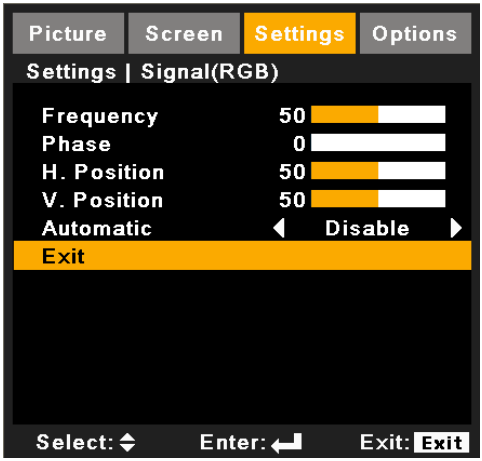
NOTE

- *Password default value is "1234" (first time).*
- *Always keep the password in your files. If the password is forgotten or lost, please contact your local authorized service center.*

Security

- On: Choose “On” to use security verification when turning on projector.
- Off: Choose “Off” to be able to switch on the projector without password verification.

SETTING | Signal (RGB)



NOTE

■ *Signal is supported except Video and S-Video.*

Frequency

Change the display data frequency to match the frequency of your computer’s graphic card. Use this function only if the image appears to flicker vertically.

Phase

Synchronize the signal timing of the display with the graphic card. If the image appears to be unstable or flickers, use this function to correct it.

H. Position

- Press the ◄ to move the image left.
- Press the ► to move the image right.

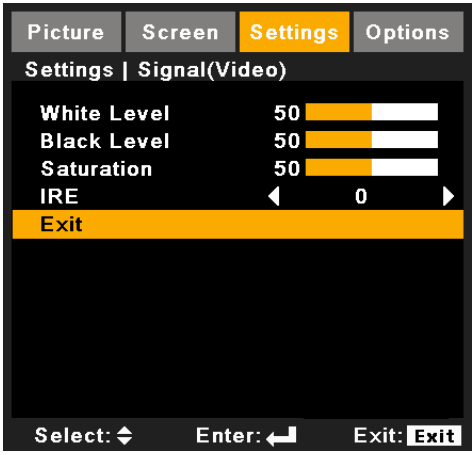
V. Position

- Press the ◄ to move the image down.
- Press the ► to move the image up.

Automatic

Automatically detects the signal. If you use this function, the phase, frequency items are grayed out, and if signal is not automatic, the phase, frequency items will appear for user to manually tune and saved in settings after that for next time projector turns off and on again.

SETTING | Signal (Video)



NOTE

■ *"Signal" is only supported when the source is Video or S-video.*

White Level

Allow user adjust White Level when inputting S-Video or Video signals.

Black Level

Allow user adjust Black Level when inputting S-Video or Video signals.

Saturation

Adjust a video image from black and white to fully saturated color.

- Press the ◄ to decrease the amount of saturation in the image.
- Press the ► to increase the amount of saturation in the image.

IRE

Adjust setup(black) level of composite video signals.

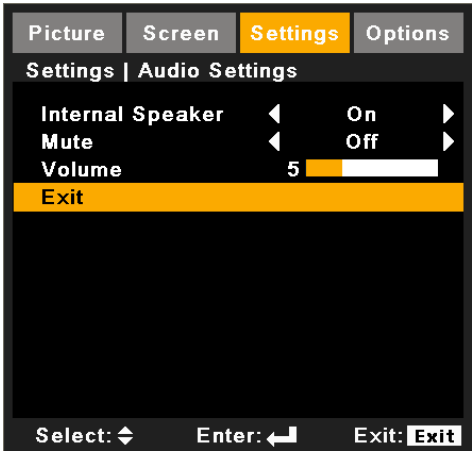
NOTE

■ *"IRE" is only supported on NTSC signal.*

Projector ID

ID definition can be set up by menu (range 0-99) to indicate an individual projector.

SETTING | Audio Settings



Internal Speaker

Choose the “On” or “Off” to turn on or off the internal speaker.

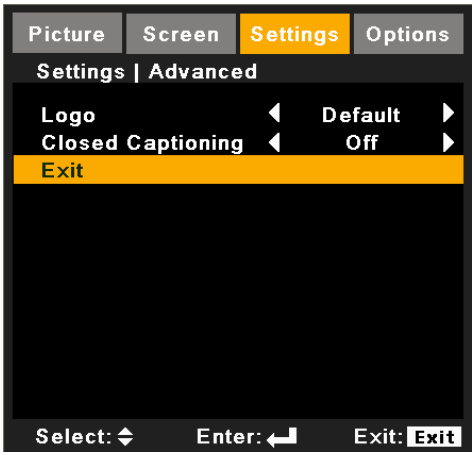
Mute

- Choose the “On” to turn mute on.
- Choose the “Off” to turn mute off.

Volume

- Press the ◄ to decrease the volume.
- Press the ► to increase the volume.

SETTING | Advanced



Logo

Use this function to set the desired startup screen. If changes are made they will take effect the next time the projector is powered on.

The function is not available when PIP is on.

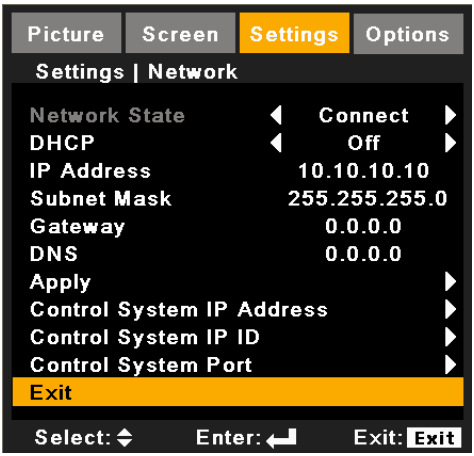
- Default: The default startup screen (RICOH).
- Neutral: Logo is not displayed on startup screen.

Closed Captioning

If changes are made they will take effect the next time the projector is powered on.

- Off: select “off” to turn off the closed captioning feature.
- CC1: CC1 language: American English.
- CC2/CC3/CC4: CC2/CC3/CC4 language (depending on the TV channel of the user): Spanish, French, Portuguese, German, Danish.

SETTING | Network



Network State

Display the network connection status.

LAN setting is not available when LAN is disconnected.

DHCP

Use this function to select your desired startup screen. If you change the setting from one to another, when you exit the OSD menu, the new setting will take effect on next open.

- On: Assign an IP address to the projector from an external DHCP server automatically.

  When making a connection in the local area network.

  1. Connect the computer and the projector to your network.
  2. Press the ‘menu’ key in the remote controller.
  3. Select Setting -> Network -> DHCP (as following).

  4. DHCP mode selects ‘On.’

     If IP Address is 0.0.0.0, please check the connection and try again.

     If still can not get the IP Address, please contact your network administrator.

- Off: Assign an IP address manually.

IP Address

Select an IP address.

Subnet Mask

Select subnet mask number.

Gateway

Select the default gateway of the network connected to the projector.

DNS

Select DNS number.

Apply

Press "↵" and then choose "Yes" to apply the selection.

- *All of the new settings of the non-DHCP mode shall be triggered by "Yes".*

Control System IP Address

Select an IP address for Crestron Control System.

Control System IP ID

Select an IP ID for Crestron Control System.

Control System Port

Select a connection port for Crestron Control System.

Crestron RoomView Control Tool

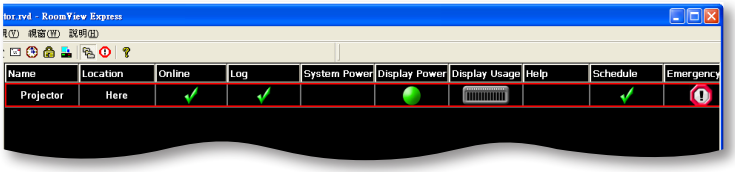
Crestron RoomView™ provides a central monitoring station for 250+ control systems on a single Ethernet network (more are possible, the number depends on the combination of IP ID and IP address). Crestron RoomView monitors each projector, including projector's online status, system power, lamp life, network setting and hardware faults, plus any custom attribute as defined by the Administrator.

The Administrator can add, delete, or edit room information, contact information and events, which are logged automatically by the software for all users. (Operation UI as following image)

NOTE

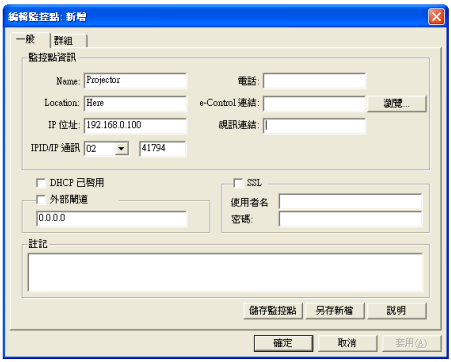
■ *Crestron RoomView function support is dependent on models.*

1. Main Screen



2. Edit Room

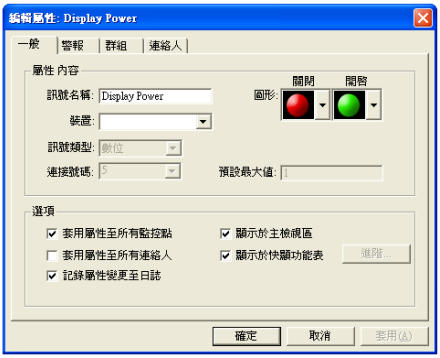
   On the "Edit Room" page, enter the IP Address (or hostname) as shown on the projector's on-screen display (OSD) menu, and "02" for IPID, "41794" for the reserved Crestron control port.



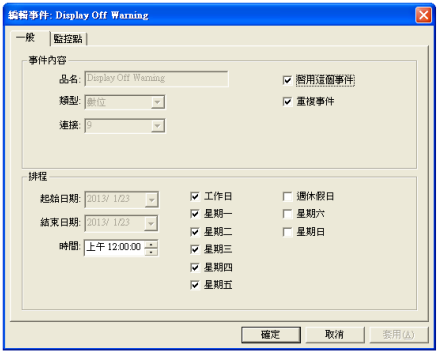
   About Crestron RoomView™ setting and command method, please access below website to get RoomView™ User Guide and more information:

http://www.crestron.com/products/roomview_connected_embedded_projectors_devices/resources.asp

3. Edit Attribute



4. Edit Event



For more information, please visit http://www.crestron.com & www.crestron.com/getroomview.

Network supports Crestron (Room View), AMX (Device Discovery Beacon Validation Tool) , PJLink and RS232 control.

SETTING | Image Blending

Blending

- Choose the “On” to turn blending on.
- Choose the “Off” to turn blending off.

Crop

- Choose the “On” to turn crop on.
- Choose the “Off” to turn crop off.

Overlap

This allows you to set the overlap edge of blending area.

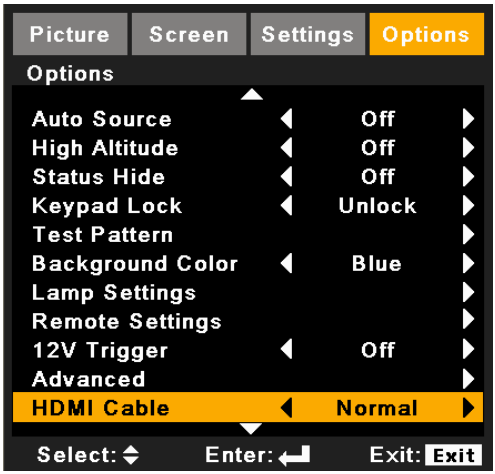
Bright Adj.

This allows you to adjust the brightness of the blending area.

Gamma

This allows you to select the gamma mode.

OPTIONS



Auto Source

- On: The projector will only search current input connection.
- Off: The projector will search for other signals if the current input signal is lost.

NOTE

- *Press direct source key on remote controller, it will change source directly and automatically set the Source Lock to "ON".*
- *To turn off the keypad lock, press and hold "Enter" key on top of the projector for 5 seconds.*

High Altitude

When "On" is selected, the fans will spin faster. This feature is useful in high altitude areas where the air is thin.

Status Hide

- On: Choose "On" to hide the info message.
- Off: Choose "Off" to show the "searching" message.

Keypad Lock

When the keypad lock function is "On", the control panel will be locked however, the projector can be operated by the remote control. By selecting "Off", you will be able to reuse the control panel.

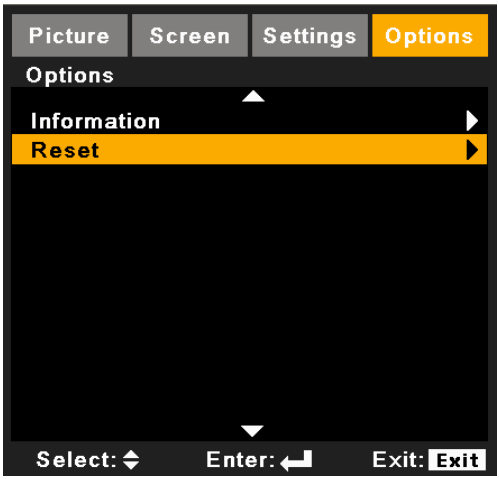
Test Pattern

Display a test pattern. There are Grid, White and None.

Background Color

Use this feature to display a "Blue", "Black", "Red", "Green", or "White" screen when no signal is available.

OPTIONS (Continue)



12V Trigger

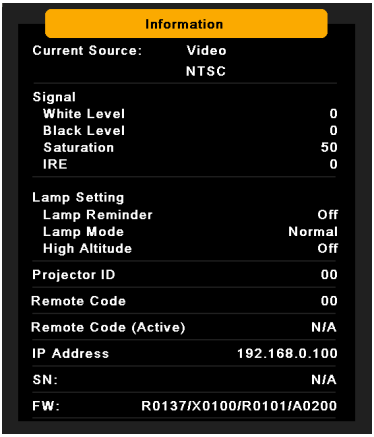
12V trigger provides a standard trigger for motorized screens.

HDMI Cable

Specify the HDMI cable length. Available options: Normal / Long / Short.

Information

Display the projector information for source, resolution, and software version on the screen.



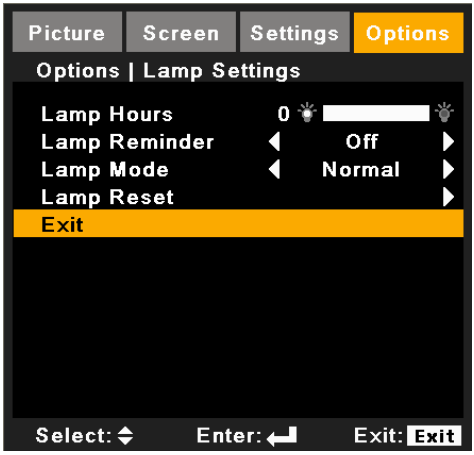
- *Remote code: show the remote code of the projector.*
- *Remote code(Active): show the remote code of the remote control. To use this function, press any key on the remote. Remote code will be shown.*

Reset

Choose “Yes” to return the display parameters on all menus to the factory default settings.

The following settings will still remain: Phase, H. Size, User, Language, Projector Position, High Altitude Mode, Security Settings, and Keystone.

OPTIONS | Lamp Settings



Lamp Hours

Display the projection time.

Lamp Reminder

Choose this function to show or to hide the warning message when the changing lamp message is displayed.

The message will appear 30 hours before suggested replacement of lamp.

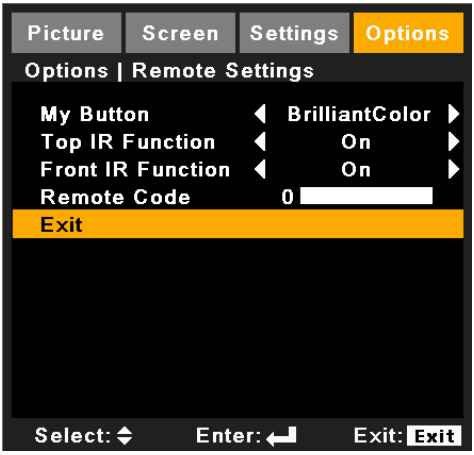
Lamp Mode

- Normal: Choose “Normal” to increase the brightness.
- ECO: Choose “ECO” to dim the projector lamp which will lower power consumption and extend the lamp life.
- Advanced: the lamp power can be adjusted in detail.

Lamp Reset

Reset the lamp hour counter after replacing the lamp.

OPTIONS | Remote Settings



My Button

Choose your desired function from “BrilliantColor”, “Gamma”, "DynamicBlack", "Color Temp.", "Projection", "Projector ID" or “HDMI Cable”.

Top IR Function

When this function is “On”, the projector can be operated by the remote control from top IR receiver.

By selecting “Off”, you will be able to use the control panel keys or operate by the remote control from front IR receiver.

Front IR Function

When this function is “On”, the projector can be operated by the remote control from front IR receiver.

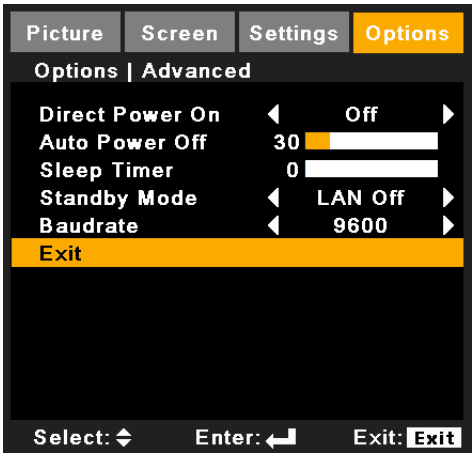
By selecting “Off”, you will be able to use the control panel keys or operate by the remote control from top IR receiver.

Remote Code

Set remote code of the projector.

- Default code (common code): 00
- Remote code: 01 ~ 99

OPTIONS | Advanced



Direct Power On

Choose “On” to activate Direct Power mode. The projector will automatically power on when AC power is supplied, without pressing the “⏻” key on the projector control panel or on the remote control.

Auto Power Off

Sets the countdown timer. The countdown timer will start, when there is no signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

Sleep Timer

Sets the countdown timer. The countdown timer will start, with or without a signal being sent to the projector. The projector will automatically power off when the countdown has finished (in minutes).

Standby Mode

- LAN On: Choose “LAN On” when you control the projector via the LAN terminal during power standby.
- LAN Off: Choose “LAN Off” to disable the LAN terminal and reduces the power consumption during the power standby.

Baudrate

Select serial port baudrate from “9600”, “19200”, or “38400”.

Appendices

Troubleshooting

If you experience a problem with your projector, please refer to the following information. If a problem persists, please contact your local reseller or service center.

Image Problems

No image appears on-screen

- Ensure all the cables and power connections are correctly and securely connected as described in the “Installation” section.
- Ensure the pins of connectors are not crooked or broken.
- Check if the projection lamp has been securely installed.
- Make sure you have removed the lens cover and the projector is switched on.

Partial, scrolling or incorrectly displayed image

- Press "SYNC" on the control panel or the remote control.
- If you are using a PC:
  - For Windows 95, 98, 2000, XP, Windows 7:
    1. Open the “My Computer” icon, the “Control Panel” folder, and then double click on the “Display” icon.
    2. Select the “Settings” tab.
    3. Verify that your display resolution setting is lower than or equal to UXGA (1600 x 1200).
    4. Click on the “Advanced Properties”.

  If the projector is still not projecting the whole image, you will also need to change the monitor display you are using. Refer to the following steps.

    1. Verify the resolution setting is lower than or equal to UXGA (1600 x 1200).
    2. Select the “Change” button under the “Monitor” tab.
    3. Click on “Show all devices”. Next, select “Standard monitor types” under the SP box; choose the resolution mode you need under the “Models” box.
    4. Verify that the resolution setting of the monitor display is lower than or equal to UXGA (1600 x 1200).

- If you are using a Notebook:
  - First, follow the steps above to adjust resolution of the computer.
  - Press the toggle output settings. example: [Fn]+[F4]

Notebook Brand	Function Keys
Acer	[Fn]+[F5]
Asus	[Fn]+[F8]
Dell	[Fn]+[F8]
Gateway	[Fn]+[F4]
IBM/Lenovo	[Fn]+[F7]
HP/Compaq	[Fn]+[F4]
NEC	[Fn]+[F3]
Toshiba	[Fn]+[F5]
Mac Apple	System Preference -> Display -> Arrangement -> Mirror display

- If you experience difficulty changing resolutions or your monitor freezes, restart all equipment including the projector.

The screen of the Notebook or PowerBook computer is not displaying your presentation

Some Notebook PCs may deactivate their own screens when a second display device is in use. Each has a different way to be reactivated. Refer to your computer's documentation for detailed information.

Image is unstable or flickering

- Adjust the "Phase" to correct it.
- Change the monitor color setting from your computer.

Image has vertical flickering bar

- Use “Frequency” to make an adjustment.
- Check and reconfigure the display mode of your graphic card to make it compatible with the projector.

Image is out of focus

- Make sure the lens cover is removed.
- Adjust the Focus function for the projector lens.
- Make sure the projection screen is between the required distance.

The image is stretched when displaying 16:9 DVD title

- When you play anamorphic DVD or 16:9 DVD, the projector will show the best image when the projector display mode is set to 16:9 in the OSD.
- If you play 4:3 format DVD titles, please change the format to 4:3 in the projector OSD.
- If the image is still stretched, you will also need to adjust the aspect ratio by referring to the following:
- Please setup the display format as 16:9 (wide) aspect ratio type on your DVD player.

Image is too small or too large

- Move the projector closer to or further from the screen.
- Press “Menu” on the control panel. Go to “SCREEN” --> “Aspect”and try the different settings.

Image has slanted sides:

- If possible, reposition the projector so that it is centered on the screen and below the bottom of the screen.
- Press the "Keystone" button on the remote control, until the sides are vertical.

Image is reversed

- Adjust the “SETTING" --> "Projection” to correct it.

Projector Problems

The projector stops responding to all controls

- If possible, turn off the projector, then unplug the power cord and wait at least 60 seconds before reconnecting power.
- Check that “Keypad Lock” is not activated by trying to control the projector with the remote control.

Lamp burns out or makes a popping sound

- When the lamp reaches its end of life, it will burn out and may make a loud popping sound. If this happens, the projector will not turn on until the lamp module has been replaced. To replace the lamp, follow the procedures in the “Replacing the Lamp” section.

If the remote control does not work

- Check if the operating angle of the remote control is within ±30° both horizontally and vertically on one of the IR receivers on the projector.
- Make sure there is no obstruction between the remote control and the projector. Move to within 12 m (±0°) of the projector.
- Make sure the batteries are inserted correctly.
- Replace batteries if they are exhausted.
- Ensure that you have set your remote to the correct IR code setting.

When making a direct connection from your computer to the projector

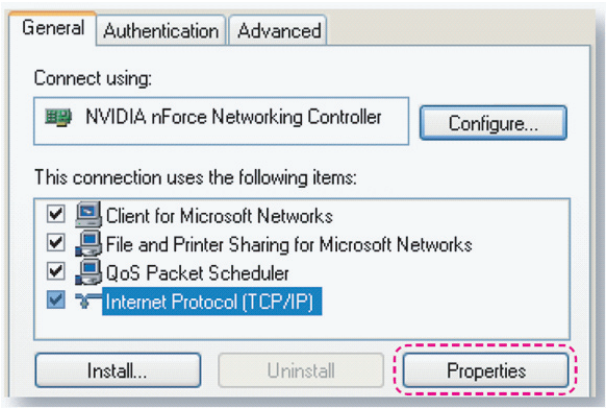
- If you have network connection problem from your computer to the projector, please refer to the computer setting as below or contact with web administrator.

  Step 1: Find an IP Address (192.168.0.100) from LAN function of projector.

  Step 2: Select “Apply” and push the “Enter” button. Once the setting is saved, exit the OSD by pushing “Menu” button.

  Step 3: To open Network Connections, click **Start**, click **Control Panel**, click **Network and Internet Connections**, and then click **Network Connections**. Click the connection you want to configure, and then, under **Network Tasks** , click **Change settings of this connection**.

Step 4: On the **General** tab, under **This connection use the following items**, click Internet Protocol(TCP/IP), and then click "**Properties**".

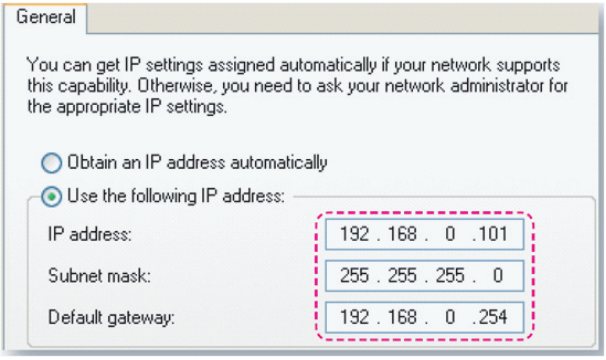


Step 5: Click **Use the following IP address**, and type in as below:

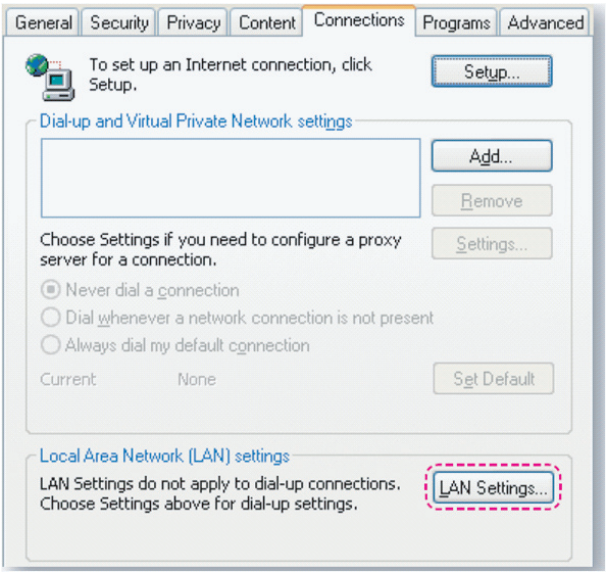
1) IP address: 192.168.0.101

2) Subnet mask: 255.255.255.0

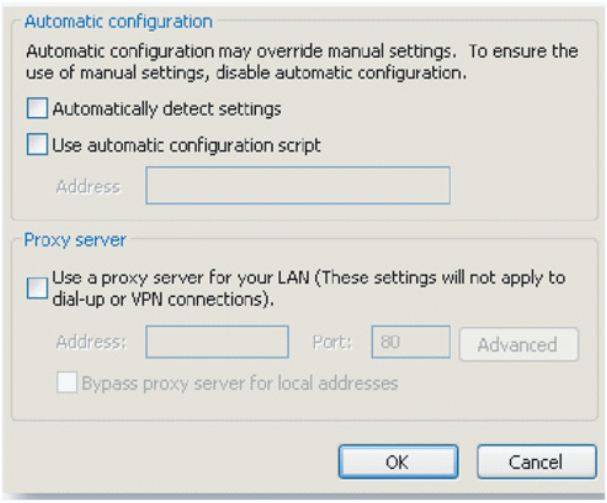
3) Default gateway: 192.168.0.254


General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 0 .101
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
192 . 168 . 0 .254

Step 6: To open Internet Options, click IE web browser, click Internet Options, click the **Connections** tab and click "**LAN Setting…**".



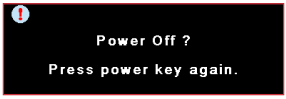
Step 7: All items in the **Local Area Network (LAN) Setting** window must unchecked. Then click "OK" button twice.


Automatic configuration
Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration.
Automatically detect settings
Use automatic configuration script
Address
Proxy server
Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).
Address:
Port:
80
Advanced
Bypass proxy server for local addresses
OK
Cancel

Step 8: Connect a cat5 Ethernet cross-over cable between the projector and the computer.

On Screen Messages

- Power off confirm



- Lamp error

- Lamp Life warning

- Filter error

Replacing the Lamp

A warning message will be displayed once the lamp has surpassed life expectancy.

At this point, it is recommended to change the lamp as soon as possible. Please contact the dealer to acquire a lamp.

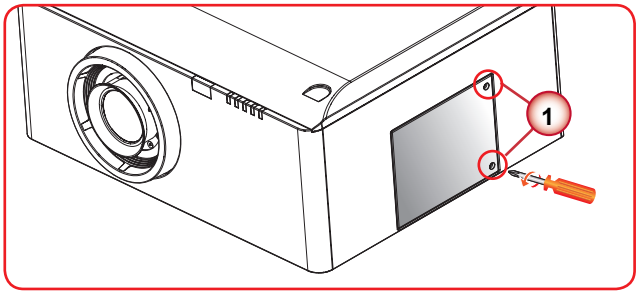
Type number: RICOH replacement lamp type 13

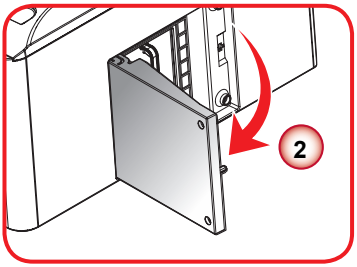
CAUTION!
HIGH PRESSURE LAMP MAY EXPLODE IF IMPROPERLY HANDED. REFER TO LAMP REPLACEMENT INSTRUCTIONS.
ATTENTION:
Les lampes à haute pression peuvent exploser si elles sont mal utilisées.
Confier l'entretien à une personne qualifiée.

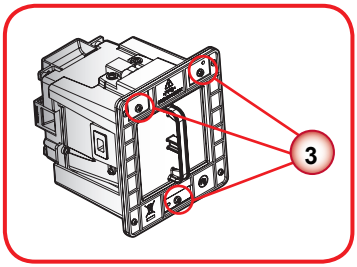
Warning: If ceiling mounted, please use caution when opening the lamp access panel. It is recommended to wear safety glasses if changing the bulb when ceiling mounted. “Caution must be used to prevent any loose parts from falling out of projector.”

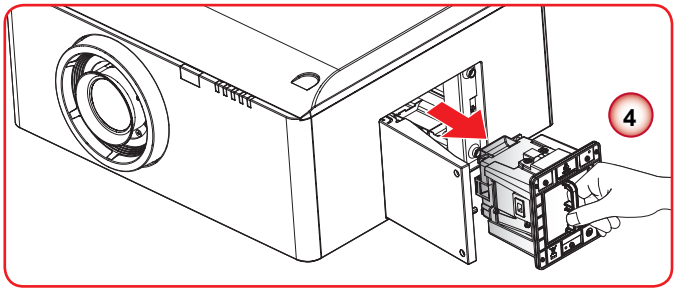
Warning: Lamp compartment is hot! Allow it to cool down before changing lamp!

Warning: To reduce the risk of personal injury, do not drop the lamp module or touch the lamp bulb. The bulb may shatter and cause injury if it is dropped.









Lamp Replacing Procedure:

1. Switch off the power to the projector by pressing the "⏻" button.
2. Allow the projector to cool down for at least 60 minutes.
3. Disconnect the power cord.
4. Unscrew the two screws on the lamp door. ①
5. Open and pull up the lamp door. ②
6. Unscrew the three screws on the lamp housing. ③
7. Pull out the lamp module slowly and carefully. ④

To replace the lamp module, reverse the previous steps.

8. Turn on the projector and use "Lamp Reset" after the lamp module is replaced.
   Lamp Reset: (i) Press "Menu" → (ii) Select "OPTIONS" → (iii) Select "Lamp Settings" → (iv) Select "Lamp Reset" → (v) Select "Yes".

Compatibility Modes

Computer Compatibility (PC)

Signal	Resolution	Frequency H. (KHz)	Refresh Rate (Hz)	Video	Digital	Analog	Remark
NTSC	-	15.734	60	○	-	-	
PAL/SECAM	-	15.625	50	○	-	-	
	640 x 350	31.5	70.1		○	○	70Hz
	640 x 400	37.9	85.1		○	○	85Hz
	720 x 400	31.5	70		○	○	
	720 x 400	37.9	85		○	○	
	720 x 576		50		○	○	
VGA	640 x 480	31.5	60		○	○	
VGA	640 x 480		67		○	○	
VGA	640 x 480	37.9	72.8		○	○	72Hz
VGA	640 x 480	37.5	75		○	○	
VGA	640 x 480	43.3	85		○	○	
SVGA	800 x 600	35.2	56.3		○	○	56Hz
SVGA	800 x 600	37.9	60.3		○	○	60Hz
SVGA	800 x 600	46.9	75		○	○	
SVGA	800 x 600	48.1	72.2		○	○	72Hz
SVGA	800 x 600	53.7	85.1		○	○	85Hz
	832 x 624		75		○	○	
XGA	1024 x 768	48.4	60		○	○	
XGA	1024 x 768	56.5	70.1		○	○	70Hz
XGA	1024 x 768	60	75		○	○	
XGA	1024 x 768	68.7	85		○	○	
	1152 x 864		75		○	○	
HD720	1280 x 720		50		○	○	
HD720	1280 x 720		60		○	○	
WXGA	1280 x 768	47.4	60		○	○	
WXGA	1280 x 768		75		○	○	
WXGA	1280 x 768		85		○	○	
WXGA-800	1280 x 800		60		○	○	
SXGA	1280 x 1024	64	60		○	○	
SXGA	1280 x 1024	80	75		○	○	
SXGA	1280 x 1024	91.1	85		○	○	
SXGA+	1400 x 1050		60		○	-	
UXGA	1600 x1200	75	60		○	○	
HD1080	1920 x 1080		24		○	○	
HD1080	1920 x 1080		50		○	○	
HD1080	1920 x 1080		60		○	○	
WUXGA	1920 x 1200		60		○	○	Only support [RB] timing
HDTV	1920 x 1080	33.8	30	○	-	-	
	1920 x 1080	28.1	25	○	-	-	

Signal	Resolution	Frequency H. (KHz)	Refresh Rate (Hz)	Video	Digital	Analog	Remark
	1920 x 1080i		50	-	○	○	
	1920 x 1080i		60	-	○	○	
	1920 x 1080p		24	-	○	○	
	1920 x 1080p		25	-	○	○	
	1920 x 1080p		30	-	○	○	
	1920 x 1080p		50	-	○	○	
	1920 x 1080p		60	-	○	○	
	1280 x 720	45	60	○	-	-	
	1280 x 720p		50	-	○	○	
	1280 x 720p		60	-	○	○	
SDTV	720 x 576	31.3	50	○	-	-	
	720 x 576i		50	-	○	○	
	720 x 576p		50	-	○	○	
	720 x 480	31.5	60	○	-	-	
	720 x 480i		60	-	○	○	
	720 x 480p		60	-	○	○	

Computer Compatibility for MAC

Resolution	Refresh Rate (Hz)	Macbook compatibility		Macbook Pro (Intel) compatibility		Power Mac G5 compatibility		Power Mac G4 compatibility	
		Digital	Analog	Digital	Analog	Digital	Analog	Digital	Analog
800x600	60	○	○	○	○	-	-	○	-
800x600	72	○	○	○	○	-	○	○	○
800x600	75	○	○	○	○	-	○	○	○
800x600	85	○	○	-	○	-	○	○	○
1024x768	60	○	○	○	○	-	○	○	○
1024x768	70	○	○	○	○	-	○	○	○
1024x768	75	○	○	○	○	-	○	○	○
1024x768	85	○	○	○	○	-	○	○	○
1280x720	60	○	○	○	○	-	○	○	○
1280x768	60	○	○	○	○	-	-	-	○
1280x768	75	-	○	-	○	-	○	○	○
1280x768	85	-	○	-	○	-	-	-	○
1280x800	60	-	○	-	○	-	○	○	○
1280x1024	60	○	-	-	○	-	○	○	○
1280x1024	75	○	-	-	○	-	○	○	-
1920x1080	60	○	-	-	○	-	○	○	○
1920x1200 (*1)	60	○	-	-	○	-	○	○	○

NOTE

■ *(*1)1920 x 1200 @60hz only support RB(reduced blanking).*

Remote Key Code

Default custom code => 80EB

Mode 01 ~ 99 => 0010~0073

Format => NEC

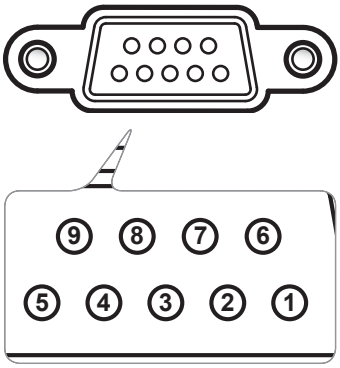
Key	Byte3	Byte4	Key	Byte3	Byte4
Sync (Auto Sync)	15	EA	Pattern	F0	0F
Keystone	07	F8	My Button	F1	0E
Up	40	BF	HDMI	21	DE
Down	41	BE	DVI	2C	D3
Left	42	BD	BNC	29	D6
Right	43	BC	Focus	08	F7
Mode (Color Mode)	23	DC	Zoom	09	F6
Aspect	27	D8	Shift (Lens Shift)	F2	0D
Mute	06	F9	Memory (Lens Shift Memory)	F3	0C
Enter	13	EC	RC ID	96	69
Standby (Power Off)	02	FD	Info.	4C	B3
Power On	12	ED	Reset (Default)	F4	0B
Exit	1D	E2	RGB Gain (Color setting)	F5	0A
Menu	1B	E4	Lamp PW (Lamp power)	28	D7
Source	14	EB	PIP	F6	09
Computer	20	DF	Blend (Image blending)	F7	08
Video	2A	D5	GEO (Geometry)	F8	07
S-Video	2B	D4	Blank	11	EE

Remote operation

1. Under below conditions, the remote will enter “sleep mode” after 60 seconds.
   a. No button pressed
   b. Multi-keys pressed simultaneously
   c. One key pressed continuously over 60 seconds
2. Remote ID switching
   Press “RC ID” key for 3 seconds to enter switching mode, the LED will flash slowly.
   a. Default ID, press “0” + “0”, ID will reset to default custom code (83F4), and this is a common code.
   b. Other ID, such as “01”, press “0” + “1”; ID range 00 ~ 99

- If LED flash 3 times quickly, this means switching setup successfully;
- No any setting within 10 seconds, remote will exit the switching mode and keep the original ID.

RS232 Pin Assignments



Pin No.	PC Side	Projector Side (RS232 Terminal)
1	N/A	N/A
2	RXD	RXD
3	TXD	TXD
4	N/A	N/A
5	GND	GND
6	N/A	N/A
7	N/A	N/A
8	N/A	N/A
9	N/A	N/A

Setup Information

RS-232 protocol	
Baud Rate	9600 bps (default)
Data Length	8 bit
Parity Check	None
Stop Bit	1 bit
Flow Control	None

NOTE

- *RS232 shell is grounded.*
- *RS232 interface need use swap pin for RS232 communication.*

Specifications

Technology	TI 12°, Type A DMD, 0.7” XGA
ASIC	DDP2431 + PW392C
Native Resolution	XGA (1024x768)
Computer compatibility	IBM PC Compatible, support HDTV (1080i/p, 720p, 576i/p, 480i/p) include both PC and component inputs
Video compatibility	NTSC M(3.58MHz), 4.43MHz PAL (B, D, G, H, I, M, N), 4.43MHz SECAM (B, D, G, K, K1, L), 4.25/4.4MHz HDTV 720p (50/60Hz), 1080i/p (50/60Hz), 1080p (24/25/30/50/60Hz) SDTV 480i/p, 576i/p
Horizontal scan rate	15 k - 100 kHz
Vertical scan rate	24-87Hz
Keystone correction	V: +/-20 degrees H: +/-20 degrees (optional board)
Weight	Net weight (w/o lens): 13.9 kg Weight with package (w/o lens): 17.3 kg
Dimensions (W x D x H)	453mm(W) x 390mm(D) x 212mm(H) (without lens, with elevators) (17.83”(W) x 15.35”(D) x 8.34”(H))
Power supply	100~240VAC ± 10%, 50~60Hz (Auto-ranging and Power factor correction)
Power consumption	• Normal Brightness mode: 500W maximum • ECO Brightness mode: 370W • Standby mode (LAN off): < 0.5 W
Operating temperature	5ºC to +40ºC / 41°F~104°F

I/O connectors	• Power socket x 1 • HDMI x 1 • Computer In x 1 • Monitor x 1 • S-Video x 1 • DVI-D x 1 • Video x 1 • RGBHV/YPBPR (BNC) x 1 • Audio input x 1 • Audio output x 1 • Serial x 1 • 12V Trigger x 1 • LAN (RJ45) x 1 • Wired remote port In x 1
Standard package contents	• AC power cord x 1 • VGA cable x 1 • Remote control (with batteries) x 1 • User's Manual CD x 1 • Lens mount cover x 1 • User's Manual (Paper) x 1 • Warranty Card x 1

■ *Design and specifications are subject to change without prior notice.*